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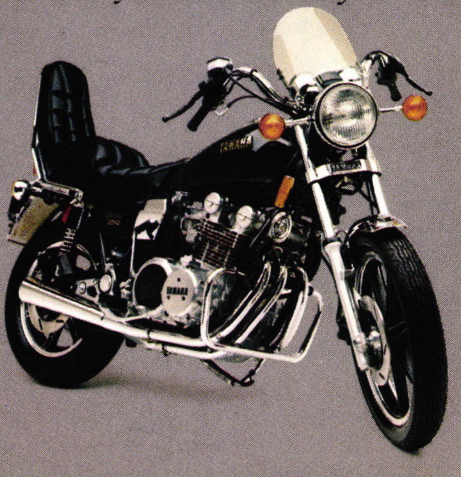

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cycle guide
cycle guide

COVER: Robin Riggs' photo rendering of Honda's Interstate, what the Gold Wing should have been all along and what its competition will wish they were.

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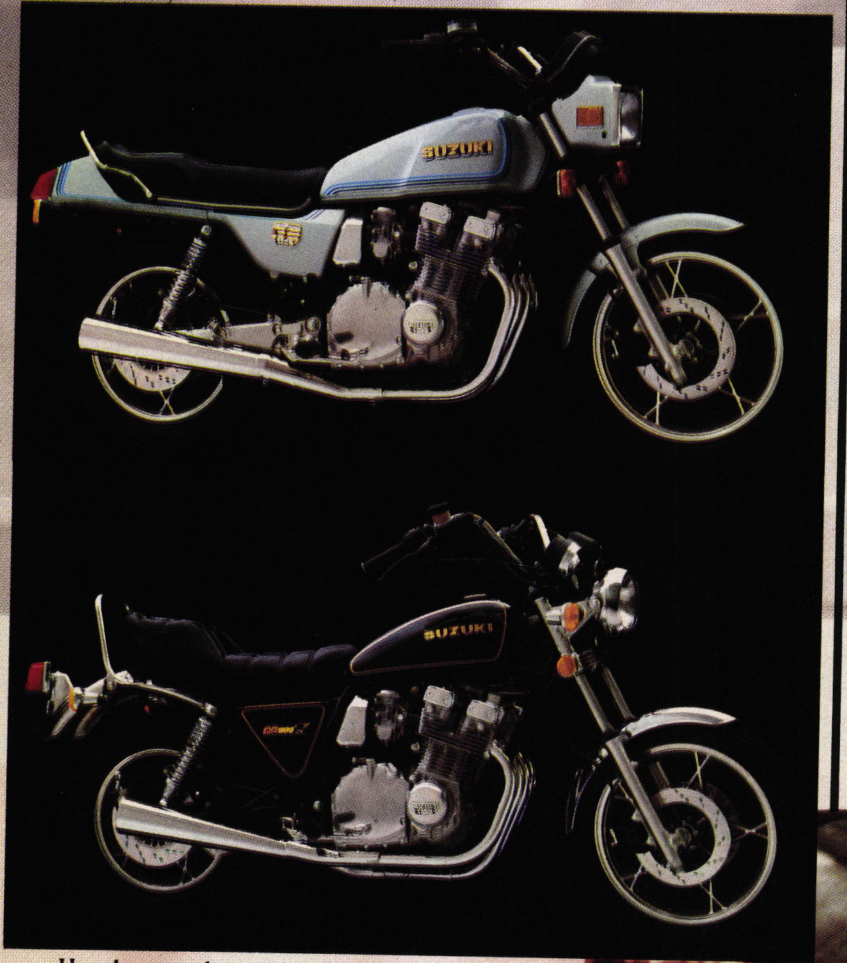
Suzuki Performance

Win a Suzuki!



Here's your chance to win an exciting new GS-1100 of your choice. That's right, two lucky winners will choose either the super-sporty GS-1100E or the super-flashy GS-1100L.

Both GS-1100s feature a powerful 16-valve DOHC 4-stroke engine with patented Twin Swirl Combustion Chamber, multi-adjustable suspension, triple slotted disc brakes and much more!

Plus, each of the winners will receive a Suzuki full-face helmet and a special Terry Vance/Team Suzuki jacket.

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To enter the Sweepstakes, just drop by your participating Suzuki Dealer for an Official Entry Form and full details.

That's it. Nothing to buy. Of course, you must have a valid driver's license. Sweepstakes ends March 31, 1980. So visit your Suzuki Dealer now!

Free Competition Calendar For Everyone Who Enters.

This beautiful 24″ x 37″ full-color 1980 calendar/poster features Team Suzuki in action. (Limit one calendar per person.) See your Suzuki Dealer for details.

1980/SUZUKI
The Performer.

SUZUKI 1980
The Performer.

Sweepstakes void in Hawaii, Utah and where prohibited or restricted by law.

Cycle Guide's Cycle Guide

OFF-ROAD

MAKE & MODEL	ISSUE	ENGINE TYPE	WHEEL TRAVEL, IN. FRONT/REAR	WEIGHT, LBS	HORSEPOWER@RPM*		GEARS
Can-Am 175 Qualifier	Aug. '78	Two-str.	7.7/7.1	234	16.4	9000	6
Can-Am 250 MX-5	Jan. '79	Two-str.	10.8/10.0	218	32.1	8500	5
Can-Am 250 Qualifier III	Feb. '80	Two-str.	9.7/9.8	230	25.2	8000	6
Honda CR125R	Jan. '80	Two-str.	11.5/10.8	202	20.8	10500	6
Honda CR250R	May '78	Two-str.	11.8/11.0	220	27.7	7500	5
Honda XL185	March '79	Four-str.	7.4/6.75	239	11.2	7500	5
Honda XL250S	Oct. '78	Four-str.	7.8/7.7	262	14.8	8000	5
Honda XR185	March '79	Four-str.	8.0/7.75	221	12.8	10000	6
Honda XR500	May '78	Four-str.	8.5/8.6	273	25.8	6500	5
Husqvarna 125CR-'80	Nov. '79	Two-str.	11.8/11.8	214	18.8	11000	6
Husqvarna 250CR	Dec. '78	Two-str.	11.8/11.8	227	24.3	8500	6
Husqvarna 390CR	Jan. '78	Two-str.	9.6/10.0	234	29.3	6000	6
Husqvarna 250WR	Aug. '79	Two-str.	9.5/9.5	238	21.9	6500	6
Kawasaki KLX250	Sept. '79	Four-str.	9.8/10.5	239	15.2	8500	5
Kawasaki KX125 A5	Oct. '79	Two-str.	9.8/10.0	194	20.0	11000	6
Kawasaki KX250 A5	June '79	Two-str.	11.0/10.9	219	27.9	8000	5
Maico 400 Magnum	July '78	Two-str.	10.0/9.8	226	30.2	6500	5
Montesa Cappra 414 VE	Oct. '79	Two-str.	10.9/10.7	236	28.5	6500	4
Suzuki PE175	Aug. '78	Two-str.	8.8/9.4	216	11.2	9000	6
Suzuki RM125T	Dec. '79	Two-str.	11.2/11.7	200	19.8	10500	6
Suzuki RM250N	May '78	Two-str.	11.2/11.8	218	27.1	8000	5
Suzuki RM400N	Sept. '79	Two-str.	11.2/11.8	229	28.1	7500	5
SWM 175 ISDT	Aug. '78	Two-str.	10.0/10.0	220	17.3	9500	6
SWM 250 MX	Nov. '78	Two-str.	10.0/10.0	216	29.5	9000	5
Yamaha Pro-Tec 600	Nov. '79	Four-str.	10.5/10.1	262	46.2	6500	5
Yamaha YZ125E	Feb. '78	Two-str.	9.3/9.1	198	15.9	11000	6
Yamaha IT175F	Aug. '78	Two-str.	7.2/7.2	217	15.7	9000	6
Yamaha IT250G	Dec. '79	Two-str.	9.8/9.8	244	27.7	8000	6
Yamaha YZ250F	April '79	Two-str.	10.7/10.4	220	28.0	7500	6
Yamaha YZ400F	Feb. '79	Two-str.	10.7/10.4	226	36.9	7000	5

*Horsepower shown is calculated from figures taken at the rear wheel and does not account for transmission losses between the engine and rear wheel. These results may differ from manufacturer's claims or from results obtained using a different dynomometer.

STREET

MAKE & MODEL	ISSUE	ENGINE TYPE*	QUARTER-MILE, SEC./MPH	TOP SPEED, MPH	WEIGHT, LBS	FUEL CONSUMPTION, MPG	STOPPING DISTANCE FROM 60 MPH, FT.
BMW R80/7	Oct. '78	2C	13.47/97.90	104	442	38-46	138
BMW R100T (Dressed)	Aug. '79	2C	13.81/92.9	119	521	38-53	142
Ducati Darmah	Sept. '78	90-deg. 2D	13.41/97.50	118	487	25-40	120
Dunstall-Suzuki GS1000 CS	July '79	4A	11.32/117.0	154	488	37-.5	124
H-D CLE Sidecar	Sept. '79	45-deg. 2D	17.60/69.3	91	1036	25-35	181
Honda CX500	Feb. '78	80-deg. 2E	13.86/93.40	106	449	28-50	134
Honda CX500 Custom	Aug. '79	80-deg. 2E	14.12/92.9	102	468	44-51	146
Honda CB650	Feb. '79	4A	13.29/99.9	113	447	37-51	131
Honda CB650 Custom	Dec. '79	4A	13.10/99.8	113	447	44-52	131
Honda CB750F	Oct. '79	4A	12.41/106.8	128	524	31-52	135
Honda CB750K	Nov. '79	4A	12.77/105.8	124	525	38-52	130
Honda GL-1000 (Dressed)	Aug. '79	4C	14.40/90.4	127	704	33-49	141
Honda CBX	Dec. '79	6A	11.86/114.5	130	555	19-36	145
Kawasaki KZ650 Custom	May '79	4A	13.16/100.2	116	483	45-49	125
Kawasaki KZ1000 MkII	April '79	4A	12.06/110.3	130	545	34-46	129
Kawasaki KZ1000 ST	April '79	4A	12.23/111.0	132	574	38-45	130
Kawasaki Z1-R	Nov. '78	4A	12.21/109.9	130	541	31-47	133
Kawasaki KZ1300	March '79	6A	11.79/115.7	140	664	31-39	133
Laverda 1200 Jota	Dec. '78	3A	12.54/105.0	121	518	29-37	145
Suzuki GS425N	March '79	2B	14.59/88.8	NA	382	45-55	NA
Suzuki GS750EC	July '78	4A	12.57/105.6	120	509	31-47	133
Suzuki GS750LN	Sept. '79	4A	12.87/103.5	120	526	41-50	129
Suzuki GS850N	March '79	4A	12.81/104.0	116	566	35-45	153
Suzuki GS1000EC	Nov. '78	4A	12.15/110.9	131	520	31-49	126
Suzuki GS1000LN	June '79	4A	12.39/108.4	130	526	39-50	129
Suzuki GS1000S	July '79	4A	12.43/110.0	132	539	39-45	124
Triumph Bonneville	Dec. '78	2B	13.41/96.2	110	414	42-49	NA
Triumph Bonneville Special	July '79	2B	13.94/96.2	110	411	45-55	175
Yamaha RD400F	June '79	Two-str. 2B	14.16/90.18	98	355	30-43	129
Yamaha SR500E	April '78	1B	14.98/84.20	92	364	49-58	132
Yamaha TZ750E	April '79	Two-str. 4A	11.62/125.5	180	331	NA	NA
Yamaha XS850LG	Feb. '80	3A	13.10/101.7	116	548	42-55	144
Yamaha XS1100F	Nov. '78	4A	12.12/111.9	134	573	29-47	136
Yamaha XS1100SG	Jan. '80	4A	11.94/112.6	135	572	42-47	129

*A-Transverse Vertical, B-Vertical, C-Horizontally Opposed, D-Tandem Vee, E-Vee

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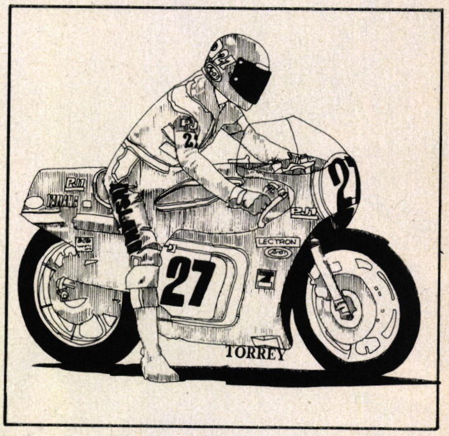

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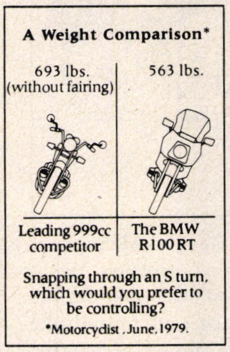
THE HIGH PRICE THAT GOES A LONG WAY.

BMW.

How do you weigh your pleasures of the road? By the pound? Or by the mile?

If it's by the mile, this BMW R100 RT represents a new lightweight, roadworthy plateau in bike riding. Admittedly high priced but, in the long run, one of the least expensive ways to go places.


A Weight Comparison*

Snapping through an S turn, which would you prefer to be controlling?

*Motorcyclist, June, 1979.

The invisible benefits of owning a BMW.

A few famous facts about this BMW R100 RT, at left, are apparent. And, like all things built to last, many are not.

Its unique, instantly recognizable integrated fairing, unlike "add-on" fairings, is engineered to be part of the total bike design—the weight distribution, suspension, even the braking characteristics of this R100 RT. An invisible but mighty road advantage.

The luster of this BMW's hand-striped, hand-"smoked" Red Smoke finish is also obvious. The special high temperature baking method that helps keep it lustrous for many years is not.

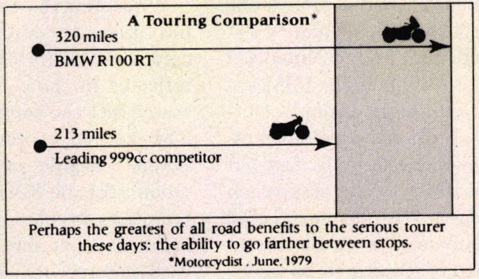
Nor are the special touring features such as a windscreen precisely adjustable to your riding stance. Or the unique rubber fork boots that seal off wind and road moisture.

Or the many luxuries, such as the custom designed BMW saddlebags, that are standard with this R100 RT.

Long Ride. Long Warranty.

"Twelve months, unlimited mileage" is an unsurpassed reassurance. Though, for a marque that has a "200,000 mile club" of owners, it seems only natural.

The fact that BMW never loses its individuality or its value in its owners' estimation is indeed the quality those BMW owners prize above all.


A Touring Comparison*

Perhaps the greatest of all road benefits to the serious tourer these days: the ability to go farther between stops.

*Motorcyclist, June, 1979

It's a definite departure from the ordinary.

As well as a sense that you've really arrived.

BMW.

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See the full line of BMW Motorcycles at your authorized BMW Dealer – listed in the Yellow Pages. For the complete BMW brochure write: Butler & Smith, Inc., Dept. 821, Norwood, N.J. 07648. Canada East: BMW Dist., Ltd., 801 Progress Ave., Scarborough, Ont. M1H 2x4. Canada West: BMW Dist. Co., 1650 W. 75th Ave., Vancouver, B.C. V6P 6G2. European Delivery Plan available.

Editorial

Burying the Past

Requiem for the UJM

• Dear friends, we are gathered here to lay to rest that revered stereotype, the Universal Japanese Motorcycle, affectionately known as the UJM. It expired of disuse and irrelevance sometime between 1978 and 1980 after a long career dating from the Sixties. And it's probably time that we finally buried the corpse.

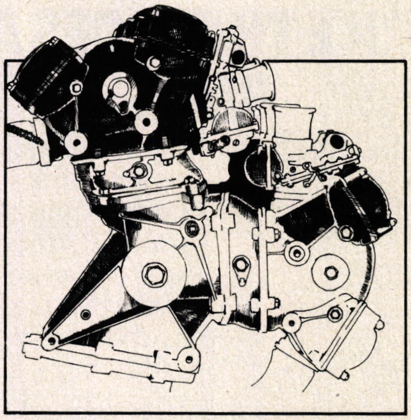
The UJM was synonymous in its day with uninspired street motorcycles. It described a style of execution repugnant to partisans of Euro-bikes. Chrome detailing, gaudy taillights, interchangeable instrumentation and a common silhouette were the symptoms. The source of the disease lay in the way the pieces were bolted together, for it was said a UJM manifested sound production technique but no engineering brilliance. The UJM was the lowest common denominator; it did not advance the cause of motorcycles or motorcycling.

Perhaps the UJM tag had some application a decade ago. But no longer. In fact, I'm convinced the term Universal Japanese Motorcycle finally has croaked for good. After a two-week business trip to Japan where Dain Gingerelli and I picked the brains of engineers and product planners at Honda, Kawasaki, Suzuki and Yamaha, I can find no evidence of life in the UJM.

Just take Kawasaki as an example. During the Seventies, Kawasaki street bikes ossified into a predictable formula: fast but rough-running engines, crude suspension and cranky handling. With the new KZ750 Four, however, Kawasaki is on the threshold of a new breed of motorcycle as significant as the Suzuki GS-series.

The KZ750 aims for high performance like other Kawasakis, but not through just more displacement and more complexity. Jun-ichi Watanabe, Senior Manager of Kawasaki Engineering, and Takayuki Tsuboi, Product Planning Manager, both emphasize that light weight and a good power-to-weight ratio is the key to everything from good performance to a comfortable ride. As a result, the new KZ750 actually is a grown-up KZ650—but the 750 weighs 20 pounds *less.* Kawasaki forecasts a future line of lean, uncomplicated street bikes—high-performance motorcycles distilled to their very essence, with none of the functional compromises demanded by heavy, complex motorcycles. This kind of thinking hardly jibes with the UJM stereotype.

The UJM label doesn't have much currency at Yamaha, either, for its street bikes resemble those of no other company. As Kunihiko Morinaga, General Manager of Four-Stroke Engineering, explains, Yamaha always has associated two-stroke engines with high performance and four-stroke motors with midrange torque, accounting for the emphasis on midrange revealed in bikes like the XS850. And because Yamaha U.S.A. firmly believes Americans prefer shaft-drive motorcycles, the factory has fitted the new XJ650 Four with a shaft, even though it has been touted as a high-performance bike.



When Yamaha engineers describe their priorities, they cite the virtue of American cars. Ride quality is crucial. That concern is reflected in the company's continued research into the control of engine vibration. The special mounting system for the XS850's engine and the rubber isolation mounts for the XJ650's motor both are attempts to insulate riders from the sort of harshness that always has been associated with motorcycles.

Suzuki's product planners admit that customer satisfaction rather than futuristic thinking has consumed most of the company's time during recent years. But even so, Suzuki isn't content with repeating the same formula endlessly, as the UJM implies. Director of Engineering Hisao Uchiyama has encouraged his staff to optimize every working part of the motorcycle for peak performance, for as product planner T. Mizuki comments, "The first function of a motorcycle is to run quickly."

The process of fine tuning can be seen in the new GS1100's adjustable suspension and TSCC combustion-chamber design. The front fork can be adjusted for air preload, spring preload and rebound damping, and even more significantly, you can feel a difference between the various settings. The Twin Swirl Combustion Chamber, meanwhile, is more than a 16-valve gambit for more horsepower, according to its designer, Engineering Manager Sadao Shirasagi. He believes this technology was *required* to deliver fuel consumption and pollution levels consistent with future rider preferences as well as future government regulations.

Honda reckons it's pushed things like quarter-mile times and top speeds to their limits, at least according to Syoichiro Irimajiri, Honda's Director of Research and Development. The priorities of the future revolve around comfort and easy handling.

When it comes to easy handling, Irimajiri regards light weight as the important factor. And since the heaviest part of any motorcycle is its engine, the problem ahead lies in reducing the weight of the engine without sacrificing the levels of performance that already have been attained. Turbocharging could make the use of small lightweight engines practical. Also, the NR500 GP racer with its 20,000-rpm redline and sophisticated cooling technology could have an enormous impact upon the design of future Honda motorcycles.

The demise of the Universal Japanese Motorcycle can be read plainly in these front-line reports from the Japanese manufacturers. We already know that the distinctive sensations and performance profiles that belong to each brand are enough to refute the UJM label. But more importantly, the information uncovered about the future of the motorcycle in *CG*'s story, "Into the Eighties" (January 1980), is reinforced by the men who control our two-wheeled destiny. The EPA and the NHTSA have done nothing to halt the progress of the motorcycle toward perfection. Those who expected motorcycle design to stagnate, creating a new form of Universal Japanese Motorcycle, are out of step with reality. We have more than just a confrontation of pinstriping preferences to look forward to in the next few years, because each of the Japanese manufacturers has committed itself to improving the two-wheeler, and in significantly different ways.

So let's finally admit that the Universal Japanese Motorcycle is as dead as a doornail. It was a pretty disreputable notion in the first place, favored by jingoistic know-nothings. Riders sensitive to the mechanical soul of their mounts always knew better. So let's bury the UJM deep. In fact, let's drive a stake through its heart, lest it rise again to suck the enthusiasm from neophyte riders and interfere with the enjoyment of motorcycles. *—Michael Jordan*

THE 1980 INTERNATIONAL TRIALS BIKES: WITH EVERY ONE YOU BUY, YOU GET A FREE YZ.

The 1980 IT's have plenty of guts—the guts of our famous YZ motocrossers.

Our IT bikes are YZ's designed to go off the beaten track. And keep going, come mud, mountains or molehills.

The IT175 is the most advanced enduro machine available. Together with our IT250 and IT425 they are the most tricked-out, competitive line of International Trials bikes one manufacturer has ever unleashed.

RIDE A BLUE STREAK.

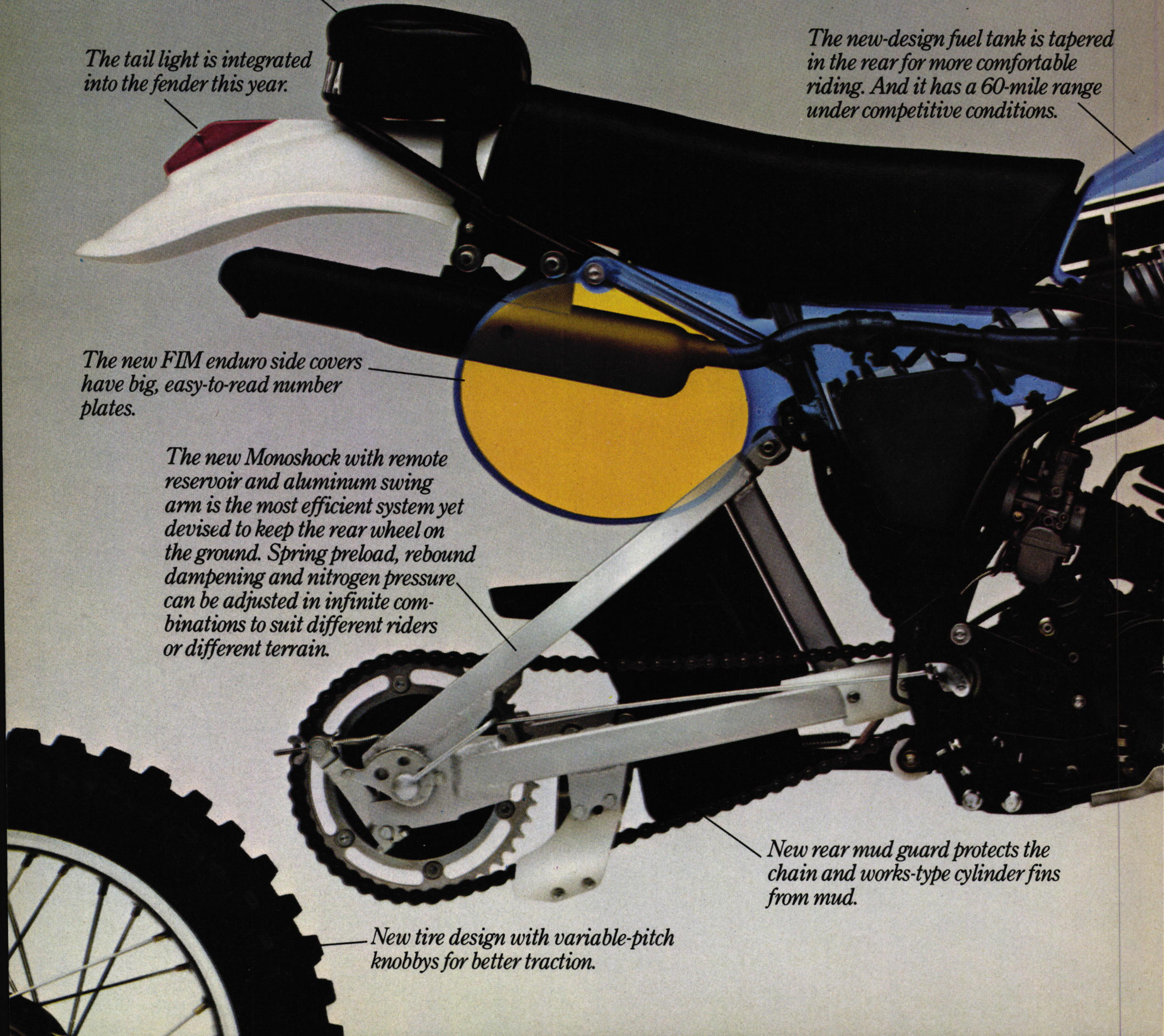
The IT175's engine, suspension and frame were born on the race track and bred to conquer the rest of the world.

Powering the 175 is an expanded, 171cc version of the YZ125's muscle. With Yamaha's unique Torque Induction. CDI ignition. And Yamaha's exclusive Powerjet carburetion that atomizes fuel better at low rpm's, providing crisper response and improved fuel economy.

In the rear there's a redesigned Monoshock with remote reservoir and aluminum swing arm. The Monoshock is lighter than last year's, yet it has greater oil capacity and more travel. In front, there's more travel for the leading-axle forks. And the chrome-moly frame is the same rigid single-down-tube design found on our YZ's.

AND RUN AMUCK.

Where the go-for-broke YZ features end, the IT175's enduro innovations take over. Like a



Easy-access tool kit.

The tail light is integrated into the fender this year.

The new-design fuel tank is tapered in the rear for more comfortable riding. And it has a 60-mile range under competitive conditions.

The new FIM enduro side covers have big, easy-to-read number plates.

The new Monoshock with remote reservoir and aluminum swing arm is the most efficient system yet devised to keep the rear wheel on the ground. Spring preload, rebound dampening and nitrogen pressure can be adjusted in infinite combinations to suit different riders or different terrain.

New rear mud guard protects the chain and works-type cylinder fins from mud.

New tire design with variable-pitch knobbys for better traction.

new mud guard to prevent mud build-up on the chain and cylinder fins. Rubber guards to protect the hand levers from mud. And a rear brake lever above the folding foot pegs, so it won't be pushed up by obstacles.

Our new rear wheel quick-change mechanism is so efficient and strong we were able to make the triangulated swing arm out of aluminum—another Yamaha first. And changing the big, new dust-eating air filter is virtually a one-handed job.

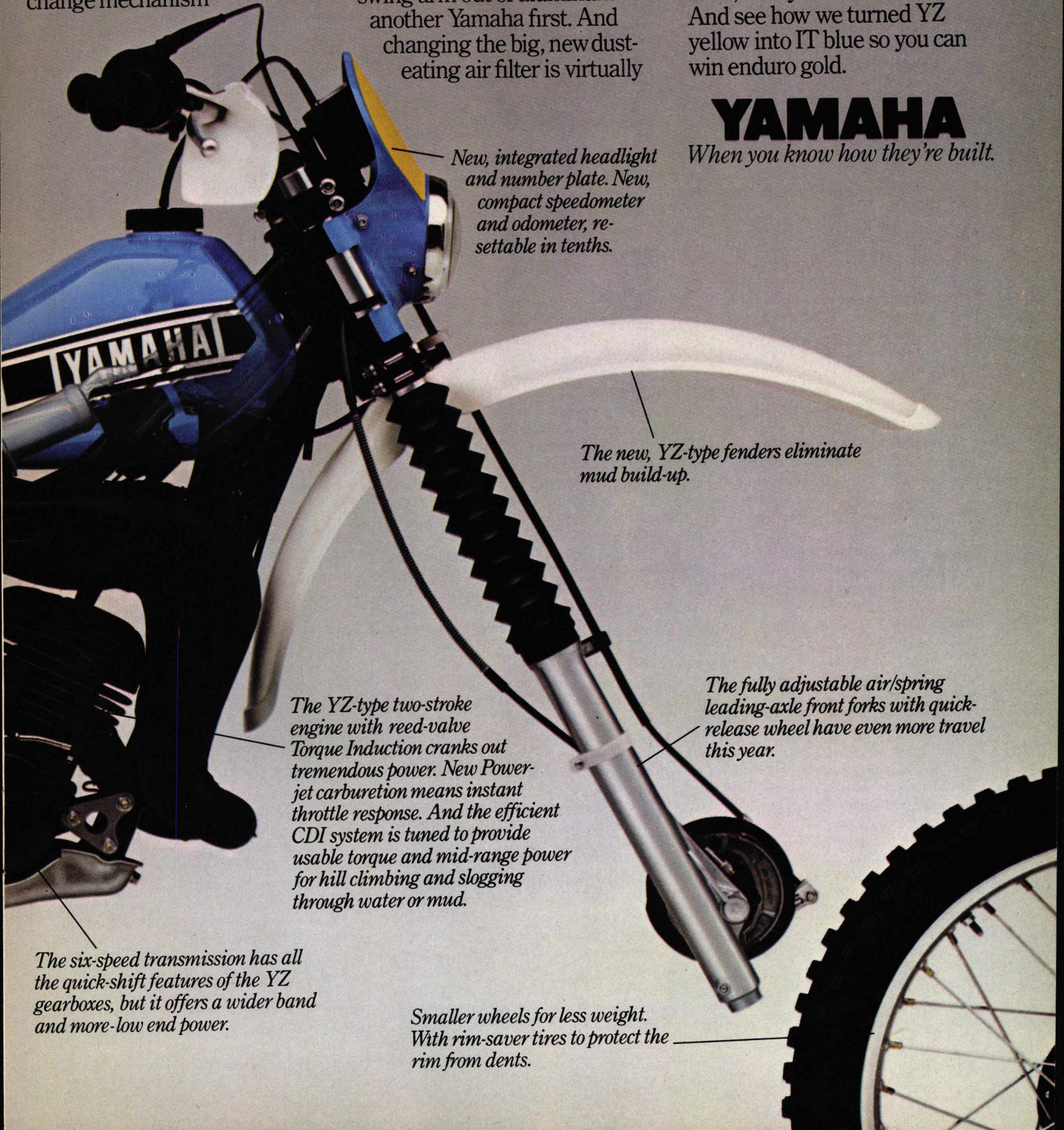
To see all our new tricks for 1980, visit your Yamaha dealer. And see how we turned YZ yellow into IT blue so you can win enduro gold.

IT 425

IT 250

YAMAHA

When you know how they're built.


New, integrated headlight and number plate. New, compact speedometer and odometer, resettable in tenths.

The new, YZ-type fenders eliminate mud build-up.

The fully adjustable air/spring leading-axle front forks with quick-release wheel have even more travel this year.

The YZ-type two-stroke engine with reed-valve Torque Induction cranks out tremendous power. New Power-jet carburetion means instant throttle response. And the efficient CDI system is tuned to provide usable torque and mid-range power for hill climbing and slogging through water or mud.

The six-speed transmission has all the quick-shift features of the YZ gearboxes, but it offers a wider band and more-low end power.

Smaller wheels for less weight. With rim-saver tires to protect the rim from dents.

West's Side

Kick Me, My Darling

The ballad of 82nd Street

• I have owned for three moderately troubled years an extremely low-mileage Yamaha XT500, and I'm not a genius. And on the very first day I moved back into New York City last fall my MG, parked directly across the street in my oh-so "safe" Manhattan residential neighborhood, disappeared without trace. In only one day in New York my Mobility Quotient had plummeted from six wheels to two.

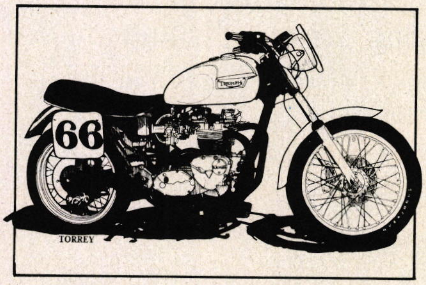
Well, it's been a thrilling few months, I can tell you, watching ice accumulate on the inside of my faceshield, getting to know New York taxicabs *Up Close And Personal*—and most of all, marvelling at the combined efforts of the N.Y.P.D. and my friendly good-palms insurance company to put off as long as possible reimbursing me for the Phantom Four-Wheeler of 82nd St. Meanwhile, though, I've learned something of real value. Namely, if necessity is the mother of invention, desperation is the whore of necessity.

See, in these past months I have gotten to know my XT500 intimately again for the first time in about two and a half years. The truth is, until now we've existed in a smoldering love-hate relationship that would be the despair of any well-intended Marriage Counselor. The source of discord has always been the same—this great, one-toothed motha steadfastly refuses to start for me. Or at least, not without a fulsome display of emotion on my part. Unless I kick her sidecovers and launch my Bell Star well up the block in blind rage at least once, the old dear won't give me so much as a fumpa-fumpa in return.

But hold it. As a Modern Murican Motorsickler you've probably forgotten there is any such thing as a Japanese street bike without that magical little red button on the right-hand grip. Nothing less than Native American Beef kicking down with all its soft, Satanic might will kindle fire in this cold-souled wench. And even that isn't enough, not without a few cursings, sidecover kickings and helmet launchings thrown in to sweeten up the deal.

Okay, you own an XT500 yourself and you don't know what the hell I'm complaining about. Bear with me, pilgrim. Remember, I already told you I wasn't a genius.

And way back last summer I had a chance to change that. I was living in Sag Harbor on eastern Long Island at the time, literally within earshot of that weekly two-wheeled tantrum known as Bridgehampton Raceway. And as I stood on the hill at Bridgehampton one Sunday afternoon watching a gaggle of ten-year-olds bump, bash and burp their way over the motocross course like toys from Hell, up walked a Certified Genius. (Every father of a ten-year-old motocrosser is a Certified Genius, it turns out, but I didn't know that yet.)



Anyway, he gave my XT500 a quick smile. He gave me a patronizing grin. I saw that and raised him two.

He also had an XT, he said. Uh-hunh. Liked all that torque. Uh-hunh. Liked the dual-purpose. Uh-hunh. A'course, it's too big for serious dirt riding. But for a five-hundert single, sure is easy to start.

Uh-unh. Nossir.

"It's not a *serious* problem, of course," I allowed, lying so bad my teeth ached. But I wasn't going to sound like the kid from Science Club who can't light his own Bunsen burner.

So inevitably, he being a Certified Genius, he asked me if I kept it tuned up properly—maybe that was my problem.

"Of course I keep it tuned up!" I replied indignantly. What did he take me for, some damn MG owner?

"Hmmmmph," he said.

Hmmmm, I thought, dropping the "ph." If he didn't have trouble starting his XT, then why are my sidecovers so kicked, my Bell Star so scarred? Washing down a morsel of pride with some Budweiser, I asked him what he did that was different.

"Nothing different," he said.

Naturally. A Certified Genius. I was about to go for my sword when he said something truly peculiar.

"Do you use the cam marker in the little window on the head to find TDC?"

"I do," I said smugly, knowing that every single one of the twenty times I'd read the Owner's Manual on starting procedure it said the same thing—use the cam marker in the little window on the etc., etc., etc.

"Well, don't," he said, his grin going so patronizing it had me thinking of Henry Kissinger. "Just don't," he repeated. "There's only one way to start an XT500."

I resisted asking for his autograph just long enough for him to explain.

"It's simple," he said. "Kick it around till it comes to compression. Then use the compression release and *gently* kick it another quarter turn. If the kick lever doesn't engage at nearly dead vertical, do the whole thing over again until it *does*. That little window's only good for seeing if your goldfish are still alive."

I stood there like some damn MG owner.

"You do all that?" he asked after a moment. And had to add, "A'course you do."

I summoned my vanity to its full height, towering over all common sense, and nodded, "Yup." My teeth were aching again.

"Hmmmmph," the Certified Genius said, "well, I don't know what to tell yuh."

We shrugged at the meaninglessness of existence and his attention immediately turned to the motocross course again. The toys from Hell were done. I started my XT—um, *bump*-started it down the hill—and rode off into the sunset.

It wasn't until the first cold snap in mid-October, however, that my pride finally snapped. I was MG-less, late for an appointment and had no time for helmet heaving and retrieving. So just once, I ignored the little window on the cam cover. I did it just like the Certified Genius said. The kick lever engaged so high I had to jump off my left foot to kick down. I kicked, once, heroically, and the old dear immediately said fumpa-fumpa-fumpa-fumpa, just like a trusty old pump motor.

I stepped back and stared. I half wanted her to kill and refuse to start without a good clout to her sidecovers. But she kept right on fumping. And has ever since, first kick every time.

Now don't get me wrong—that guy didn't know what he was talking about. I mean, the delicate personal relationship between man and motorcycle is a sacred thing. It develops only after years of patient understanding, and every man comes to this sublime relationship with his machine in his own way. Another two years and me and my XT500 would've had it made.

But now we are one. No more need for Marriage Counselors, we know each other's darkest thoughts and oiliest plugs. The future is ours.

I do have to admit one thing, though: If I'd fathered a ten-year old motocrosser a couple years back, we could've saved ourselves a lot of time. *—Ted West*

Nobody in the motorcycle business has more confidence in their products than Suzuki.

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That's right, 12 months. One solid year.

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*See "Limited Warranty" brochure for details. This warranty furnished only in the 48 contiguous United States and Alaska.

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NOW THE BEST BIKES COME WITH THE BEST WARRANTY.

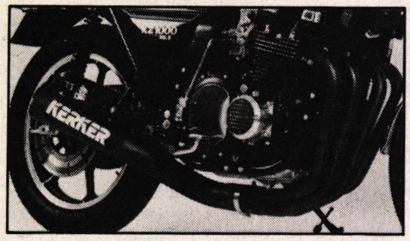
SUZUKI 1980

The Performer.

Motomart

Geegaws galore, plus a gaggle of gadgets

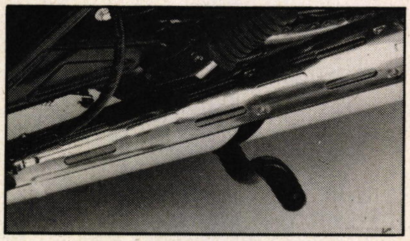
Pipe Dreams: Kerker has introduced this KZ1000 4-into-1 exhaust system, originally developed as a race pipe. Although oil-filter access and the centerstand must be sacrificed, a ground-clearance gain is claimed. Other features include a claimed performance increase, weight savings and a choice of two baffles. One baffle offers 50-state legal noise and emission levels (making the system streetable); the other is a non-street-legal competition baffle. Kerker maintains that both baffles are repackable and remove easily. Also, a proof-of-purchase coupon from these pipes will get you a Kerker T-shirt and cap. For information, write Kerker, 7900 Deering Avenue, Dept. CG, Canoga Park, California 91304. The phone number is (213) 999-3060.



BEL-RAY
Contact Cleaner

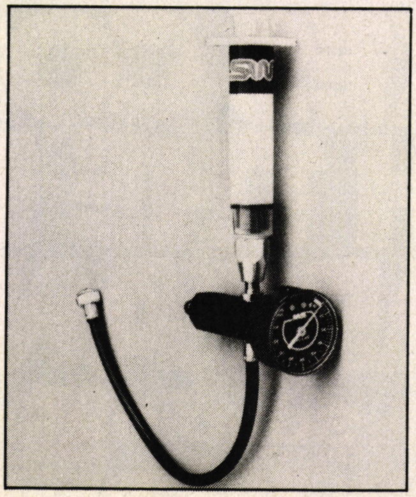
Contact Solution: It's not suggested you clean your lenses with Bel-Ray's Contact Cleaner; it works better on oil, grease and deposits on spark plugs, breaker points, switches, ignition and magneto contacts. The cleaner dries almost immediately without leaving a film or residue. This solution is listed as non-flammable (so you won't burn up your garage) and the aerosol can is "environmentally safe" (so you won't burn up the ozone). Bel-Ray's Contact Cleaner now is available in 20-ounce cans, complete with a needle dispenser for spot cleaning. To get yours, contact your nearest motorcycle dealer.

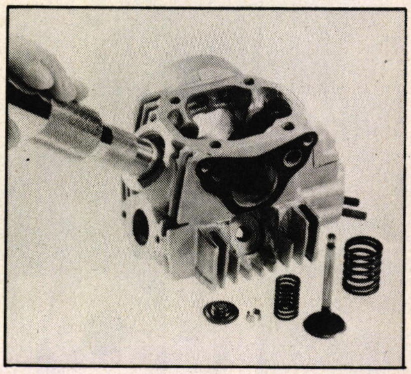
Muffler Guards: If you're sick of gummed soles permanently melting their mark onto your muffler and if your favorite passenger is sick of leg burns and hot heels, you might want to get a pair of Krauser muffler guards. They are made of heavy-gauge, rust-resistant steel so your passengers can put their heels, and their minds, to rest at the same time. Krauser muffler guards are polished and come with all the mounting hardware necessary for installation. If you've got 10 minutes and a screwdriver, save your muffler's shine and your passengers' heels. For more information contact La Gorio Sales Company, Inc., 21250 Califa Street, Suite 112, Dept. CG, Woodland Hills, California 91367. The phone number is (213) 348-9880.



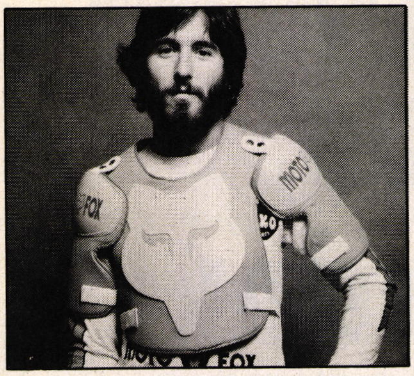
Gauntlet Gloves: The Navigator from Esprit doesn't read your map or tell you where to go, but it might keep your hands warm. The cowhide gloves feature an extra-long gauntlet and a knit cuff that are claimed to prevent cold air and rain from ever reaching your fingers. A tricot lining gives added protection. Concealed in the glove is a zippered change pouch and a watch-viewing flap. Chamois-coated index fingers let you wipe moisture from your faceshield. Suggested retail price for the Navigator mitts is $39.95. For more information contact Esprit, 1511 Alum Creek Drive, Dept. CG, Columbus, Ohio 43209.

Improving The Mini: You probably have seen S&W's Mini Pump, but now S&W takes the pump one step further by supplying it with an air gauge and release valve. Now the Mini Pump allows you to pressurize your air system and know exactly how much air you are putting in. If you over-pump and get too much air in, the release valve allows you to bleed off some of the excess. For more information, contact your local S&W dealer or write to S&W Engineered Products, 2617 West Woodland Drive, Dept. CG, Anaheim, California 92801.



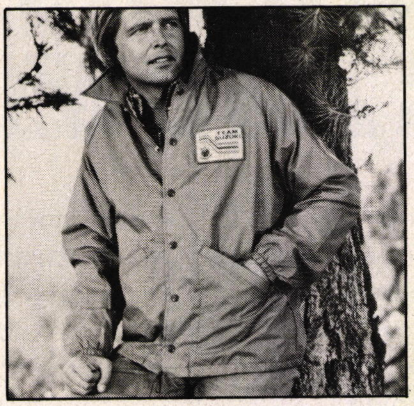


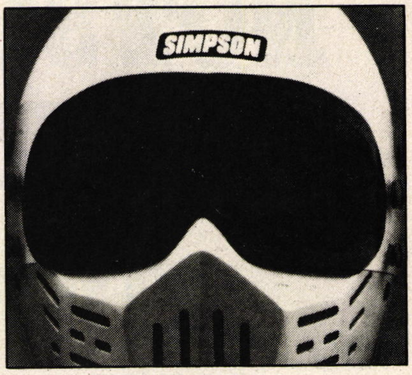
Overhead Valve Tool: Twin Magnamatics Corporation has introduced its Magnamatic overhead valve tool for use on all models of motorcycles. If the procedure for replacing the spring, retainer, keepers and seals in an overhead valve assembly are over your head, the Magnamatic might help. It is claimed that this tool will reduce the time it takes for valve assembly and disassembly by about 20 percent. The tool can be used without removing the cylinder head. There should be no need for air compressors, clamps or lifters and supposedly, bent valve stems, tension loss and loss of springs and keepers usually don't occur. For more information, contact Twin Magnamatics Corporation, P.O. Box 233, Dept. CG, Mogadore, Ohio 44260. The phone number is (216) 733-8361.



For Berm Warfare: The latest in chest protection for motocrossers is available from Moto-X Fox. Features include foam padding covered with washable nylon fabric, plastic shoulder cups and Velcro attaching straps. The protector comes in the Team Moto-X Fox colors of red and yellow, or you can get it in blue and yellow with either the Suzuki logo or the Fox logo. Retail price is $44.95. It's available from your local Moto-X Fox dealer or directly from Moto-X Fox, 520 McGlincy Lane, Dept. CG, Campbell, California 95008.

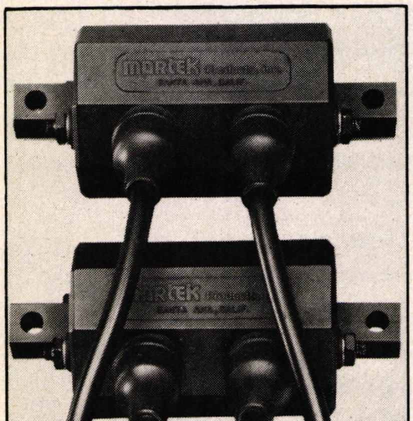
Suzuki Windbreaker: Team Suzuki Sportswear has introduced the Suzuki lined windbreaker. The outer fabric is nylon, lined with pre-shrunk fleece for added warmth. The Suzuki emblem is featured on the front of the blue, yellow or red windbreaker. The jacket is tailored with raglan sleeves, slash pockets, snap-front closure and a drawstring waist. The windbreaker comes in sizes Extra-Small through Extra-Large. To get yours, see your local Suzuki dealer.

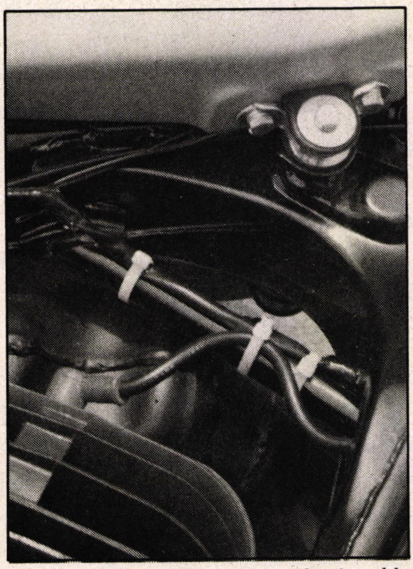




Simpson Catalog: The 1980 full-color helmet catalog now is available from Simpson Sports. The entire line of Simpson helmets is included in the catalog, as are accessories such as jackets and faceshields. Many of Simpson's new helmets are made of Kevlar 49, a material that is claimed to be tougher and lighter than fiberglass, and all Simpson helmets are Snell 75 approved. To get your catalog, send $1.00 to Simpson Sports, 22630 South Normandie Avenue, Dept. CG, Torrance, California 90502. Or you can call (213) 320-7231.

Ignition Coils From Martek: High-performance ignition coils have been introduced by Martek Products, Inc. Named "Blue Goose," these coils are claimed to provide higher voltage than OEM coils. Martek says that the ignition coils can be connected to operate with either inductive-discharge or capacitive-discharge ignitions. The suggested retail price is $98.95 for the two-coil set and $50.40 for the one-coil set. For details, contact Martek Products, Inc., 3609 West MacArthur Blvd., Santa Ana, California 92704. Or call (714) 751-7901.





Fit To Be Tied: These clear plastic cable ties from Motodesign should help solve a variety of problems in a hurry. You can use them to secure brake and throttle cables, high-tension plug leads, sidestands, and fuel and shock-reservoir lines. The ties are self-locking, 7.2 inches long and come in packages of 50. List price for one package is $4.95. For more information, contact Motodesign, P.O. Box 4233, Dept. CG, Memphis, Tennessee 38104. You can call Motodesign at (901) 324-7755.

For Bike and Bod: For absolutely no money at all, DG Performance will send you its 1980 catalog. In it you will find the latest equipment for your bike, ranging from DG's street header line to its complete line of RD350/400 products to its Odyssey and Jet Ski goodies. Just send your name and address and DG will send you its free 1980 catalog. Write: DG Performance, Inc., 1170 Van Horne Road, Dept. CG, Anaheim, California 92806. Or you can call DG at (714) 630-5471.

DG
1980
DG PERFORMANCE
BOOK OF TRICKS

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Techspeak

Charge!

Knowing when it's time to re-volt

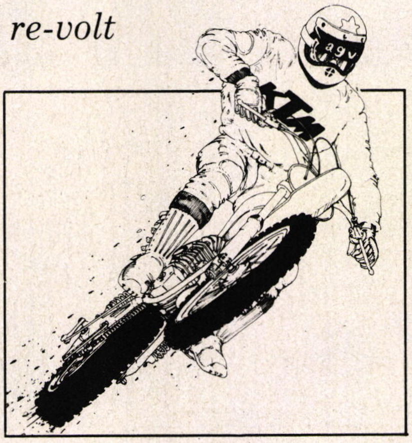
• Batteries are not immortal. Sometimes they die naturally of old age, sometimes prematurely of neglect. But whatever the reason, when the morning starting ritual degenerates into frantic kicking instead of the usual gentle caress of the starter button, it's likely that your battery has passed on to that great trickle charger in the sky.

Trouble is, many bike batteries have problems of this sort creeping up on them, but without some kind of early evidence—such as lights that won't light or starters that won't start—they go unnoticed until the prognosis is terminal, if you'll excuse the battery pun. In fact, a lot of riders seem to be unaware of their batteries altogether, and so neglect the basic service routines that are necessary to maintain their motorcycle's life-support system. And the few who do regularly top up the cells with water and clean the terminals don't know about other things that can prolong battery life.

It helps, of course, if you have some idea of how a battery works—which most people don't—but it's not necessary to plunge too deeply into the subject. Laboring over the more cerebral aspects of batteries, such as electron flow and the movement of sulfate ions would only further confuse non-scientific lay persons, who can't do anything about those factors anyway. Suffice it to say that in accordance with the principles of electrochemistry, batteries store and, upon demand, release electrical energy.

Understanding how a battery is made and a few particulars about what goes on inside one, however, can be of practical use. You should know, for instance, that when reduced to its simplest form, a lead-acid wet-cell storage battery (the type used in motorcycles and cars) consists of a layer of non-conductive material (wood, fiberglass, rubber, etc.) sandwiched between two lead plates—a positive one made of lead peroxide and a negative one made of a special spongy lead. The whole sandwich is submerged in a solution of water and sulfuric acid that is referred to as the electrolyte, and the complete package is called a cell.

A fully charged cell can deliver a maximum of 2.2 volts, no matter how big it is or how many sets of plates it contains. To get more voltage, a number of cells must be connected in series, such as the three cells in a 6-volt battery (actually 6.6 volts) and the six cells in a 12-volt battery (actually 13.2 volts). Increasing a cell's plate area by using more and larger plate-sets increases its ampere-hour rating, which is the battery's capacity to maintain a certain rate of discharge over a certain period of time when being used, as opposed to its voltage rating, which is the strength of the current being discharged. A 10-ampere-hour 12-volt battery, for example, will supply 10 amperes of 12-volt current for one hour or one ampere for 10 hours or any combination that results in 10.



During discharge, the sulfur in the electrolyte reacts with the lead plates, gradually coating them with lead sulphate. And at the same time, the electrolyte gradually becomes mostly water. If the plates are allowed to become fully coated, the reaction stops, the current ceases to flow and the battery is dead. It can be recharged, however, by feeding DC current back into it, reversing that chemical process. The lead sulfate on the plates is dissolved and the sulfur content of the electrolyte returns back to a high level. During normal use, this sulfate coating never reaches a visible level because the battery continually is being charged by the alternator.

Because sulfur is heavier than water, a hydrometer (a simple syringe-like device that siphons electrolyte up out of a cell and measures its specific gravity) can be used to determine the amount of charge left in the cell. The reading when the cell is fully charged should be about 1.275, since that is when the sulfur content of the electrolyte is greatest. A reading of 1.15 or lower means that most or all of the acid has been converted to both sulfate on the plates and water in the cell, and that the battery is in desperate need of a recharge.

Those are the principles; now for the problems. If a battery is charged at too high a rate (which never should exceed 1 to 1½ amps), some of the water in the electrolyte will bubble up and escape through the vents. And that, along with loss through natural evaporation, presents one of the biggest threats to battery life. Because if the electrolyte level drops enough to uncover some of the plates, exposed areas of soft lead will soon dry out and flake off, causing a sludge of lead to accumulate in the bottom of the battery case. Since vibration also can shake lead loose even from fully submerged plates, the resulting accumulation in the bottom of the case eventually can reach the lower edges of the plates and short out the cell.

This is why regular topping-up is essential to long battery life. Always use distilled water, too, for there are enough undesirable chemicals in tap water to prevent having the ideal electrolyte solution. This is especially a problem in areas where the alkalai (salt) content of the tap water is high, since alkalai tends to neutralize the acid in the electrolyte.

If you inspect your battery after a winter of storage, you also may see a fuzzy white coating on some of the plates. This is the dreaded massive build-up of sulfate on the negative plates caused by a very slow, normal discharge that occurs when the battery is not in use. If the battery is not trickle-charged periodically, this layer can become very thick and can be removed only by tapping the battery on the workbench. Never tap it more than gently, though, as the delicate plates will crumble if you get too physical. If gentle tapping dislodges the fuzz, it can be swilled out and the battery refilled with fresh electrolyte. The fuzz just might be too stubborn, however, and your only recourse then will be to buy a new battery—an expensive price to pay for not administering an occasional trickle charge.

One final maintenance chore is to keep the outside of the battery case clean and free from corrosion. Any electrolyte that spills from a cell will eat metal parts, so keep the area clean and coat the exposed battery terminals with petroleum jelly to prevent oxidation.

As you can see, a battery really isn't a terribly demanding device. In return for an ever-present supply of power, all it asks for is sufficient charging to replenish the current as it is used, immersion of its plates in clean electrolyte and, when not in use, a trickle charge now and again. If you take care of these simple matters, come spring you can enjoy the exhilaration of wind in your face rather than the depression of your hand reaching for your wallet.

—David Dewhurst

THEY SING IN THE
AND HOWL IN THE D

Six days a week, you've got a nice, quiet, street-legal motorcycle. You take it darn near everywhere.

And then it's Sunday.

You're out for a cruise on a winding country road. Just humming along. Then you come around a turn and you see it. A motorcycle park. With at least a dozen dirt bikes and acres and acres of trails. Everybody's attacking them full-on with their hot little two-stroke machines.

And there you sit. With your boots, your gloves, your goggles and your helmet on. So in you go. And after just a couple of minutes to get loose, you're having a ball. Up on the pegs. Screaming through the rough stuff. On the gas. Maybe even passing a dirt guy or two. And giving him a shot of your horn and turn signals just to rub it in.

Sound like some kind of complete fantasy? Well, not if you're on a Honda XL. Because Honda doesn't build a dual-purpose bike by throwing two half-purpose bikes together. Instead, Honda designs a machine that's all business in the dirt. And then makes it nice and easy for the street.

Take a look at the XL185S.

XL500S

XL250S

XL185S

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Letters

Passion's playthings, Managerial miscreants, The long hard line

LUST, PLAIN AND SIMPLE

You had to do it, didn't you? I just hope you're happy. You would show me a picture of my dream bike, then tell me I can't have it. Of course I'm referring to the photo of the Yamaha 350 L/C in the January issue. As one of the remaining loyal street-bike lovers, I could really enjoy parking this incredible machine next to my Kawasaki H2.

There is only one way to get me to forgive you. Convince Yamaha to bring this machine to the U.S. and I will be eternally grateful. I would be satisfied if they brought over only one (for me, of course).

Wade Dunham
Ashville, Ohio

Nope. It's either two or nothing. (Guess where the other one goes)—ed.

DUKING IT OUT, ROUND THREE

In reference to your Ducati vs. Honda article, what is the point? I appreciate Ducatis for *themselves*, not in relation to some soulless Japanese mechanism.

A moon rocket can do the quarter-mile faster than my Harley, but it's not a motorcycle, and neither is that Honda.

Try to be more relevant.

J.A. Stege
Vallego, California

The F not a motorcycle? You don't by any chance wear glasses, do you?—ed.

I read with interest your comparison of the 900SS and the 750F, but you forgot to mention the most telling advantage of the Honda—it costs a mere $5.43 per pound, while Ducati Meccanica extorts more than $8.90 per pound for the SS. I mean, the figures speak for themselves!

But seriously now, I am starting the J. Foyston Home For Fallen Legends And Stately Dinosaur Museum, and I'm writing to ask that my fellow Super Sport owners, amidst their mad dash to trade up/down at the Honda store, crate up the ol' crock and ship it to me. I'm crazier than a hoot-owl, boys, and I'll take 'em all!

The Rev. J.B. Foyston
No Springs, Idaho

I had to write in response to the letters printed in the December issue. I'm responding to the letters by Gino Tommasilli and Arthur Cruikshank on the Honda/Ducati test.

I have been riding for 15 years, and I know a little of what works on a race track. I own a 1980 CB750F Honda, and in stock trim it is a fine sport bike. After I bought it I added low bars, an Ontario Moto Tech pipe, 29mm smoothbores and Continental tires—no more than the modifications that were done to the 900SS in the test. I have yet to work hard to pass any stock or modified 900SS *anywhere.* In regard to the Ducati having less cylinders, fewer carbs and fewer valves as a defense of its performance in the test, remember that it also weighs less.

So, Gino, bring that Ducati to Aspen, Colorado for one of our races. There, handling counts. And bring your title with you so we can have a match race.

One final note to Mr. Cruikshank. If you think the John Long BMW or Spencer's Ducati were even close to stock, you must also believe in the tooth fairy.

Bill Hansel
Albuquerque, New Mexico

Thank you very much Mr. Tommasilli, Mr. Smith and Mr. Cruikshank for your so-called expert opinions. I must have missed something. I thought the test was supposed to be of stock bikes, but you apparently want to add accessories to the Duck to make it competitive. Doesn't that seem a little unfair to the smaller bike, the Honda? You three biased readers make excuses about Honda's advertising power while overlooking its engineering power. All I can say to you is "read the test and weep." Maybe Mr. Smith should come up to Canada with his mean BSA Lightning to see whether it can eat up my '79 F or whether my rice burner burns it.

Perry Kilpatrick
Truax, Canada

In regard to the Letters section in the December issue on the Ducati vs. Honda article, let me say this: Those of us who own Fs are quietly waiting for the rest of you hotshots to come show us your European wonderbikes.

Kevin Burns
Millfield, Ohio

LABELED LIABILITIES

I thought I'd write and tell you how shallow I find your musings on product-liability actions to be.

First, any corporation that *allows* itself to be hung on the basis of product technology that is 10 years more advanced (as in your example of comparing a 1968 model to a 1978 one) deserves a stiff judgment at the very least. Believe it or not, the law doesn't generally expect the unattainable. On the other hand, if a producer of goods doesn't quite get around to finding out that the hoses he uses for brake lines turn into Silly Putty when exposed to the sun until several years (say 10) and several fatal accidents later—well, he may deserve to pay a bit, too. This is particularly true if the materials to make the stronger, safer brake lines were available at the time the inferior materials were selected.

Secondly, most decisions that produce product-liability actions seem to be management decisions, not engineering decisions. The bottom-line types are the ones who seem to always seek more bang for the buck. Or maximum market impact at minimal expense.

Thirdly, the law will certainly allow you to assume risks. All the risks you want. As long as that assumption is a knowing one. As a general rule, I don't think that the average motorcyclist knowingly assumes the risk that the super-streamlined, ventilated stainless steel triple disc brakes on his FASUMBITCH 1600 won't work in the rain when he picks the bike up. In fact, there is a concept in commercial law—called, cleverly enough, express warranty—that tends to compel things to be what they are described as. In other words, brakes should make things *stop*. Always stop. Not frequently stop, not occasionally stop, not stop under some conditions. If there are conditions under which the brakes will not make the bike stop, then the manufacturer should—and must—make sure that the consumer knows what these conditions are *before* he buys the bike. Frankly, I think that makes a hell of a lot more sense than letting the biker find out in the first rainstorm.

Finally, I marvel that the engineer that you describe was able to reduce all the responsibilities of an engineer in relation to product-liability matters to only eight pages. While he was at it, perhaps he should have gone a bit further and reduced those responsibilities to one line: Design the best achievable product for the purpose it will be used.

George B. Mastovich
Pittsburgh, Pennsylvania

HE'LL PASS

I have just finished reading about the CBX in the December issue. As usual, you have covered the story well. But I still have to ask who needs a bike whose Ride Review contains such gems as: "... The Six corners with the awkwardness of a hook-and-ladder answering a three-alarm summons, the front and back ends dueling for control?"

If the bike's performance can't be handled by its suspension, that's where I get off. I never said I was King Kenny. No thanks, Mr. Honda. Maybe in a few years when you get it all together.

E.F. Hunt
San Jose, California

THE HARD LINE

With regard to the editorial "Fools Rush In," Doug's failure has nothing to do with motorcycles. It has to do with personal integrity.

You say that it is our fault, our bad advice that led to Doug's inability to adapt to an alternative. The fact is that the Dougs of the world quit before they accomplish their goals.

A sociologist might conclude that Doug's weak-hearted attempt is an indication that Americans are becoming too comfortable, too complacent and too noncommittal about conditions that surround us all. I conclude, however, that as an individual he lacked the integrity to accomplish a positive, constructive improvement in conditions that would have included an improvement in his character.

There is a bit of Doug in all of us, even in Kenny Roberts. Kenny is a World Champion because of his integrity; Doug will continue to flounder, to do what is easy instead of what is required, to avoid challenges that tax his abilities. You see, Doug fails to realize that the things that make life valuable do not come easy. The Dougs of the world will lose only because they cheat themselves.

And as for Paul Dean, the author of the editorial, to suggest that we motorcyclists speak less enthusiastically of our sport—our lives—is totally unbefitting of an editor of a prominent motorcycle publication.

Buzz Buzzelli
San Diego, California

Read the piece again, Buzzelli. All it said was that as responsible enthusiasts we are obliged to give the whole picture, not just one side of it—ed. ●

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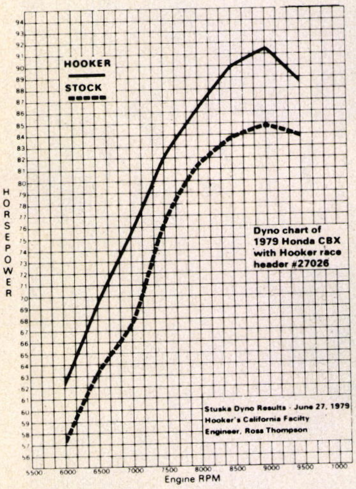

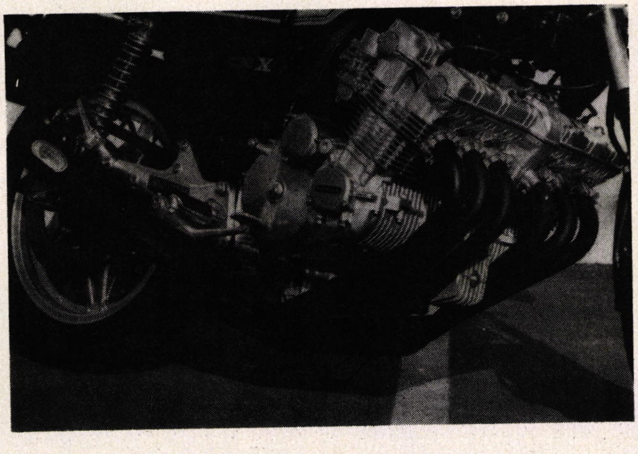

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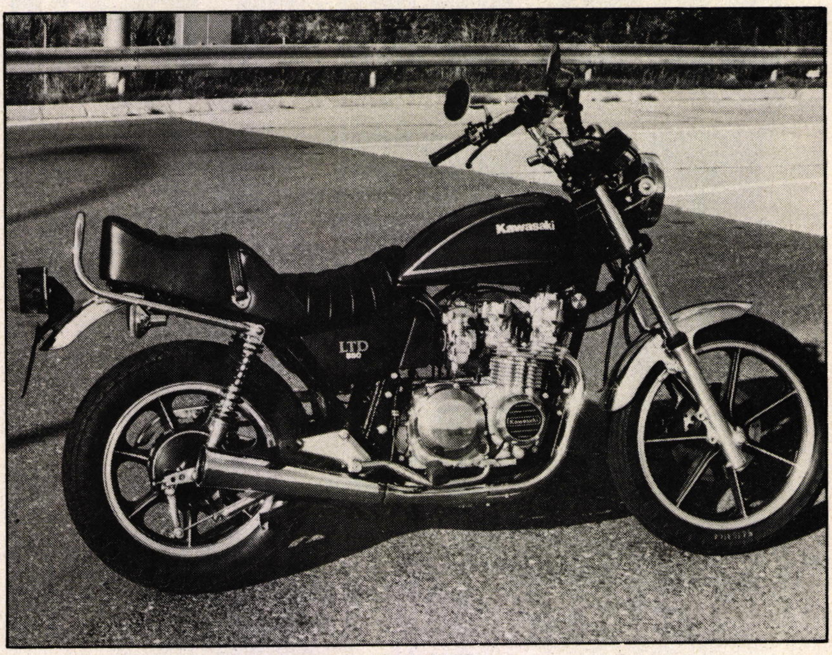
GUIDE LINES

Cycle Guide's Monthly Chronicle of Scoops, Tips, Rumors and Hard Facts

BY LARRY WORKS

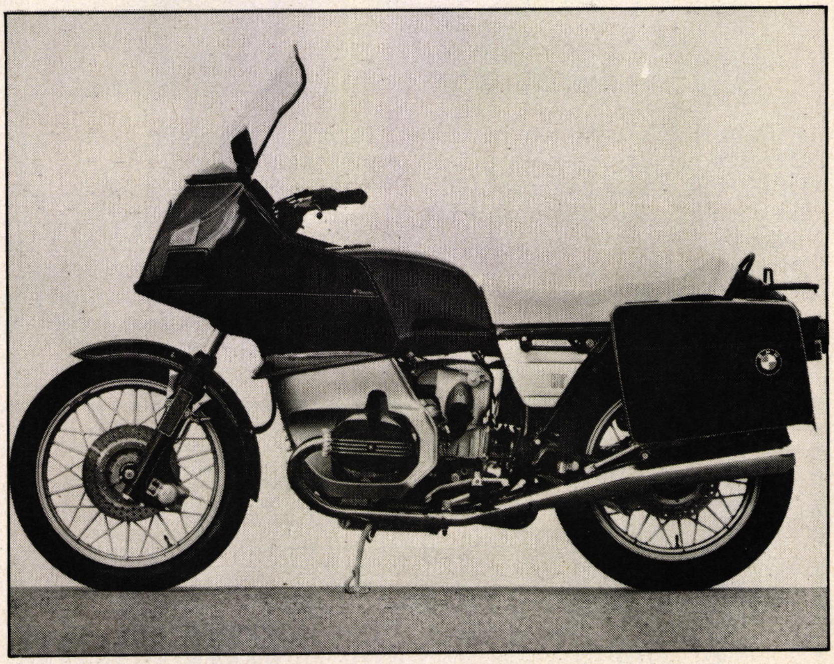
COMING SOON

- You can't buy a **water-cooled RD350** Yamaha **this year** and you might not find one next year, either. But there are alternatives. **Montesa** currently is working on a redesign of its **350cc Crono**—one that includes water cooling. The prototype Spanish waterpumper runs a fork and radiator from a TZ Yamaha, but the production version will have all Montesa parts. There's even the possibility of a **500cc** version. The Montesa factory has been observing more than the Japanese technology in the preparation of this **waterbike,** though. Reportedly, the product planners want to give the bike a "Japanese look."
- BMW has thrown its hat into the new-model ring with the recent **announcement** of its **1980** line. According to a release from **BMW,** the model line for this year "will remain basically unchanged." What changes there are include an across-the-board lower compression ratio to allow burning regular and low-lead fuels, choke levers repositioned up to the handlebar, 85-mph speedometers and dual-density seats for the 1000cc models. Also for 1980, the audible turn-signal indicator has been dropped.
- These days it's just about a foregone conclusion that there will be **gasohol** in some future tankful, no matter what you ride. Last month, this column reported that Texaco was stepping up its sale of gasohol. This month there's news that **Texaco** has **added** 250 **stations** to its gasohol list, bringing the total of Texaco stations that will sell the ethanol/gasoline fuel to 600.
- Further, there's word that Texaco is considering a project of cooperation with a **corn-refining** company to produce an expected **60 million gallons** of fuel-grade **alcohol** at a plant in Illinois.
- But alternative fuels have become **big business** seemingly overnight and Texaco is not alone. **Exxon** Corporation has just disclosed plans to begin a synthetic fuel project in Colorado and Texas. Don't plan on filling up with any of the project's fuels in the near future, though. The **wheels turn slowly** and the two plants are not due to start producing go-juice for at least six years.
- And whither Texaco and Exxon go, can **Mobil** be far behind? The answer of course is no. A plant in New Zealand is slated for the first commercial use of a patented Mobil process to convert natural gas into **gasoline** by way of a detour into **methane.** The plant will go into production soon, and plans include **conver-**



Kawasaki's new-from-the-ground-up KZ550 LTD

1980 mid-size heir to the LTD legend.



New BMW R100RT with repositioned choke lever and dual-density seat

They liked it once . . .

Continued

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GUIDE LINES *Continued*

sion of up to 13,000 barrels of gasoline per day.

- Back again to gasohol and **alcohol**-related fuels, it seems that when the movement starts moving, everyone wants to get on the bandwagon. In this case, it's the U.S. Department of **Agriculture.** In fact, the USDA is getting involved to the tune of **$30 million** in loans and grants for rural **fuel-grade** alcohol plants.
- But of course this loosening of the federal **pursestrings** doesn't represent the first **governmental interest** in gasohol. In fact, the recent **National** Gasohol Conference announced that 19 states currently use gasohol in state-owned vehicles.
- With all the interest in non-fossil fuels and the **technology** to use them these days, it was obvious that motorcycles would get involved. Take as an example an experimental bike that **Yamaha** introduced at the Tokyo Motor Show. When the bike's cylinder head reaches 20 degrees Centigrade, it **switches** over from gasoline **to alcohol.** The bike may never reach the production stages, but if it does the engineers already have given it a catchy handle. Call it **Alcool.**
- Yamaha's offering is not alone in its penchant for the good stuff. There's already a **Minarelli** moped on the market that's built to run on **pure ethanol.**
- But if you're not content to burn part alcohol, or if burning the pure stuff leaves you cool, there always are **electric motorcycles.** A student at Kansas State University has built three of them so far. His latest model is built on the remains of an old Harley / Aermacchi 350. The bike carries two **12-volt** marine batteries for power, and while it's not up to current standards of range, it will travel 10-15 miles at speeds of up to 35 mph. Sound a bit sedate? Well, maybe, but Dennis Matteson, the bike's inventor, says he still can **accelerate hard** enough to spin the rear tire.
- **Montesa** recently released its 349 Cota, and for a change of pace, this one's numerical designation matches its displacement. This new trialer displaces a full **349.6cc,** has a new six-speed gearbox, exhaust pipe and clutch. Also new for this year, the **Cota**'s swingarm has been stretched, there's more front-wheel travel and the fork now is air-assisted.
- Remember the Toyota / **Yamaha** Get-Away-From-It-All **Sweepstakes?** The contest that offered a customized "Yamahauler" Toyota pickup and three Yamaha dirt bikes as most of the **grand prize?** Well, it's history now. If you aren't 16-year-old Charlie Roylston of Franklin, North Carolina, you lost.
- And in still more news of who is handing out things, **Cosmopolitan Motors** of Hasbrouck Heights, New Jersey is now the sole U.S. distributor for **Montesa.**
- As part of a new **anti-theft** plan, Honda will computerize all parts numbers for its engine cases and frames. When the plan is in effect, you will have to show your old engine cases and frames when new ones are ordered. Your **Honda** dealer will then check the old parts' numbers against a **hot sheet** of stolen motorcycles.

- File this item under familiarity breeds familiarity. A message being circulated by the **Motorcycle Safety Foundation** is to use the **kill switch** on your motorcycle everytime you stop it. The idea is that you will become more familiar with your kill switch and will fumble less when things are shiny-side-down and you need it quickly.
- How many times have you been **cut off** by a car whose driver didn't even see you? Ever wonder what you look like to him? This question and more purportedly are answered in a 16mm seven-minute film available through the MSF for $37.00. The short feature, entitled **"A Driver's View** of Motorcycling," was prepared by the MSF and AAA Foundation for Traffic Safety.
- Adding yet more available rubber to the high-performance street market, **Avon** has just announced a new V-rated **tire.** The new **130-mph**-rated rubber goes by the name of **Venom.**
- **Bultaco's** new Mark 15 **Pursangs** are out, in both 250cc and 417cc versions. The MXers run new **reed-valve** engines, and feature primary kickstarting and redesigned gearboxes. The European-spec Bultacos are set up with Marzocchi forks and Betor shocks, providing nearly a **foot of travel** at each end.
- But the Bultacos bound for the **U.S.** are to be set up differently. The new bikes will be fitted with **Simons** forks, banana swingarms and **Works Performance** shocks. Wheel travel on the U.S. bikes will be comparable to that of the Euro-spec Pursangs.
- Much of the news this this month finds its way here by way of the **Milan** show. As expected, the Italian manufacturers cranked up to outdo each other. **Moto Guzzi** arrived with a recast, restyled **Spada** 1000 that showed a new fairing, seat and mufflers, repositioned footpegs and a claimed dry weight of 463 pounds.
- Another Guzzi that made the show was the **V-35** Imola. The diminutive vee-twin spins out a claimed **36 horsepower** at 8200 rpm.
- But not all of **Moto** Guzzi's entries at the show were vees. **Guzzi** also unveiled a new vertical **twin** four-stroke **125,** with chain-driven overhead cam, electric start and a claimed 80-mph-plus top speed extracted from its 16-hp engine.
- **Ducati** made an appearance, too, and saw fit to display a **900SS** that had been fitted with an Austrian Thaler **twin-headlamp** full **dolphin** fairing.

Inventor with Electro-Glide

Clearly a tankless job.

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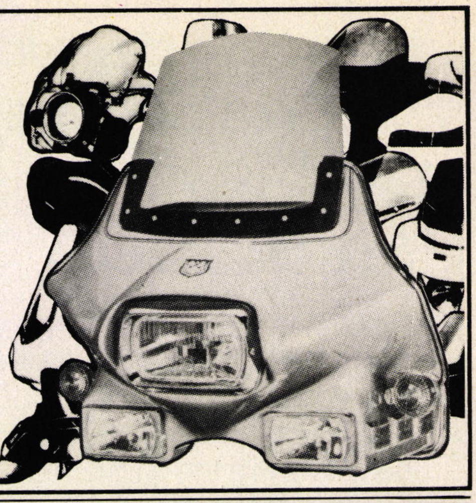

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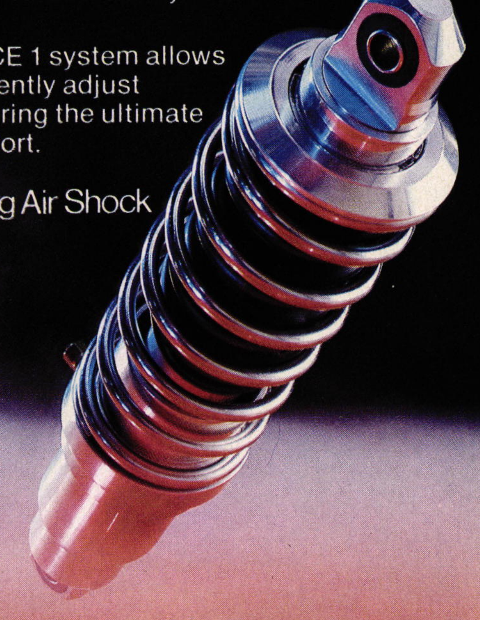

Why did Bob Larkin buy the KZ440 LTD with its 58*mpg? Because Bob always believes in going the distance.

When Bob swung a leg over the KZ440 LTD and settled down into the high-step, dual-density cruising seat, he knew he was on a winner. The pullback bars seemed to reach for his hands. And a tap on the electric starter brought the call of the road from dual megaphone mufflers. Who could resist? Its 443cc overhead cam engine with constant-velocity Mikuni carbs delivered plenty of torque, so he could accelerate quickly and cruise effortlessly. Bob liked the fact that it was Kawasaki-reliable. And he appreciated the advantages

Kawasaki
LTD 440
Kawasaki

Kawasaki believes in riding safely. Check local laws before you ride. Member of AMA and MSF. Specifications and parts subject to change without notice. Model availability may be limited.
*Information available upon request.

of a silent cam chain with automatic tensioner. After all, there are better things to do on campus than to spend your free time working on a motorcycle.

When it came to handling, the KZ440 LTD exceeded his expectations. Precision-damped front forks and needle bearing swingarm gave him a real feeling of control and security. So did the drilled front disc brake. The fat rear tire provided lots of traction, and Bob sat down low with the center of gravity right under him. Riding it was a breeze—and sheer pleasure with a close friend on the back seat.

When you stop by your Kawasaki dealer to see the slick looking KZ440 LTD, be sure to see both the chain drive and belt drive models. You might even take a look at the new KZ250 LTD. It's a little smaller, but it's got some big numbers going for it. For openers, how's 80.2* mpg grab you?

KZ250LTD

Kawasaki

Don't let the good times pass you by.

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LADIES ONLY
BEWARE OF DOGS

Why did Eddie and Debbie Moon ride from Seattle to New Orleans on the shaft drive KZ1300?

Eddie claims it helped smooth out their relationship.

And Debbie agrees. When you find a bike as smooth and dependable as Kawasaki's KZ1300, it makes being the passenger a pleasure instead of an endurance test. And that means you end the trip feeling as good about each other as when you started.

When Eddie heard that Kawasaki had a shaft drive in some of their superbikes, he knew it was time to start investigating. He first looked at the new four-cylinder KZ1000 Shaft, and knew he was on to something. But when he noticed the new KZ1300 Touring, with its mighty six-cylinder 1286cc, DOHC engine, he knew he could cruise with luggage and Debbie—and still pass an eighteen wheeler going up-hill.

He found that the shaft drive delivered an incredibly smooth, quiet ride. He felt virtually no vibration, and the silent cam chain cut down

Kawasaki
KZ1300
TOURING

the engine noise. The cooling system itself enclosed the engine with a liquid jacket to further reduce noise. Even the suspension in the KZ1300 made life easy with air-adjustable leading axle front forks and five adjustable spring pre-load settings in the rear shocks.

The custom-designed Gran Touring package made getting there all the fun. The full fairing with lowers and recessed quartz-halogen headlight were made for chasing the horizon. Full instrumentation let him ride in confidence. Spacious saddle bags and travel trunk gave him lots of space. And Debbie loved the special high-back passenger seat.

After he checked out the goodies on the KZ1300, he told Debbie to get ready for a big gumbo dinner. He knew New Orleans was no longer just a dream.

KZ1000 Shaft

The next time you're at your Kawasaki dealership, don't just stop with the KZ1300, try on the KZ1000 Shaft. These are bikes that'll bring tours to your eyes.

Kawasaki

Don't let the good times pass you by.

Kawasaki believes in riding safely. Check local laws before you ride. Member of AMA and MSF. Specifications and parts subject to change without notice. Model availability may be limited. Model shown is the KZ1300 Touring with color-and-accent-matched Gran Touring package: full fairing with lowers, coordinated saddlebags and shock-mounted travel trunk, special touring handlebars, two-piece passenger high-back seat and 7.1-gal. touring gas tank.

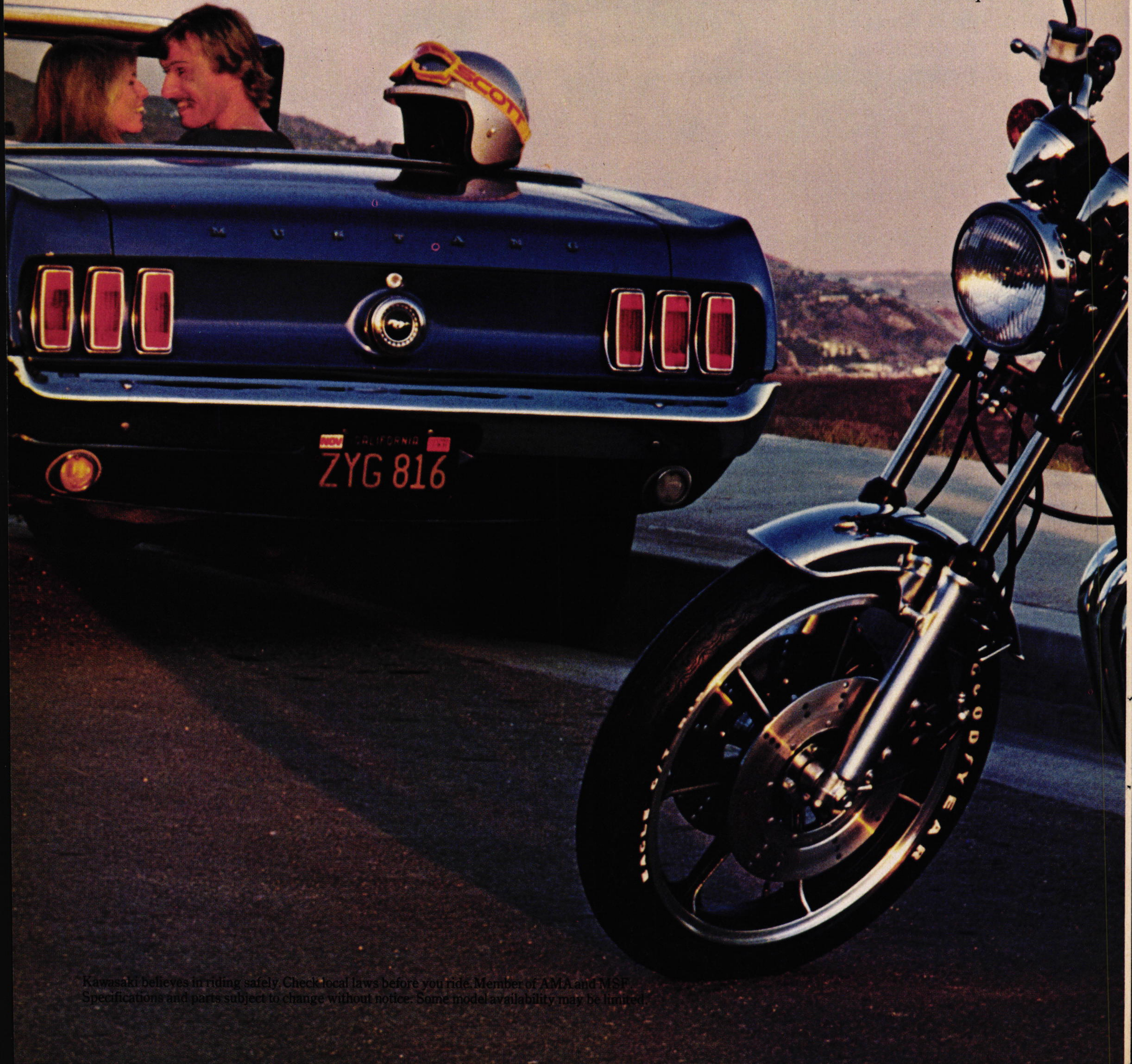
Why did Dave Lewis choose the Kawasaki KZ1000 LTD with its exclusive Clean Air System?

Because Dave believes in full power when making a pass.

Dave was impressed with Kawasaki's ability to meet the EPA standards without loss of power. In fact, he appreciated the improved acceleration, the stable idling and the short warm-ups that the unique Clean Air System gave him.

But the real truth is, Dave Lewis bought the KZ1000 LTD because he had no choice. The mean, low-down, both feet on the ground stepped seat; the low, fat rear tire; the teardrop fuel tank; the pullback handlebars; he couldn't resist.

Of course, with his friends, Dave was quick



Kawasaki believes in riding safely. Check local laws before you ride. Member of AMA and MSF.
Specifications and parts subject to change without notice. Some model availability may be limited.

to point out how reliable the 1015cc engine was; that it was easy to maintain with its transistorized breakerless ignition. He raved about the way it handled and the excellence of the three drilled disc brakes. He would mention that his was the engine that holds most major drag records and the world land speed record.

Then a lady would pass by and smile. As he smiled back, Dave knew why he bought the KZ1000 LTD.

Come and check out the KZ1000 LTD at your local Kawasaki dealership and while you're there make a pass at the other LTDs. 'Cause they've got the power to keep you out there looking good.

KZ750 LTD (FOUR)

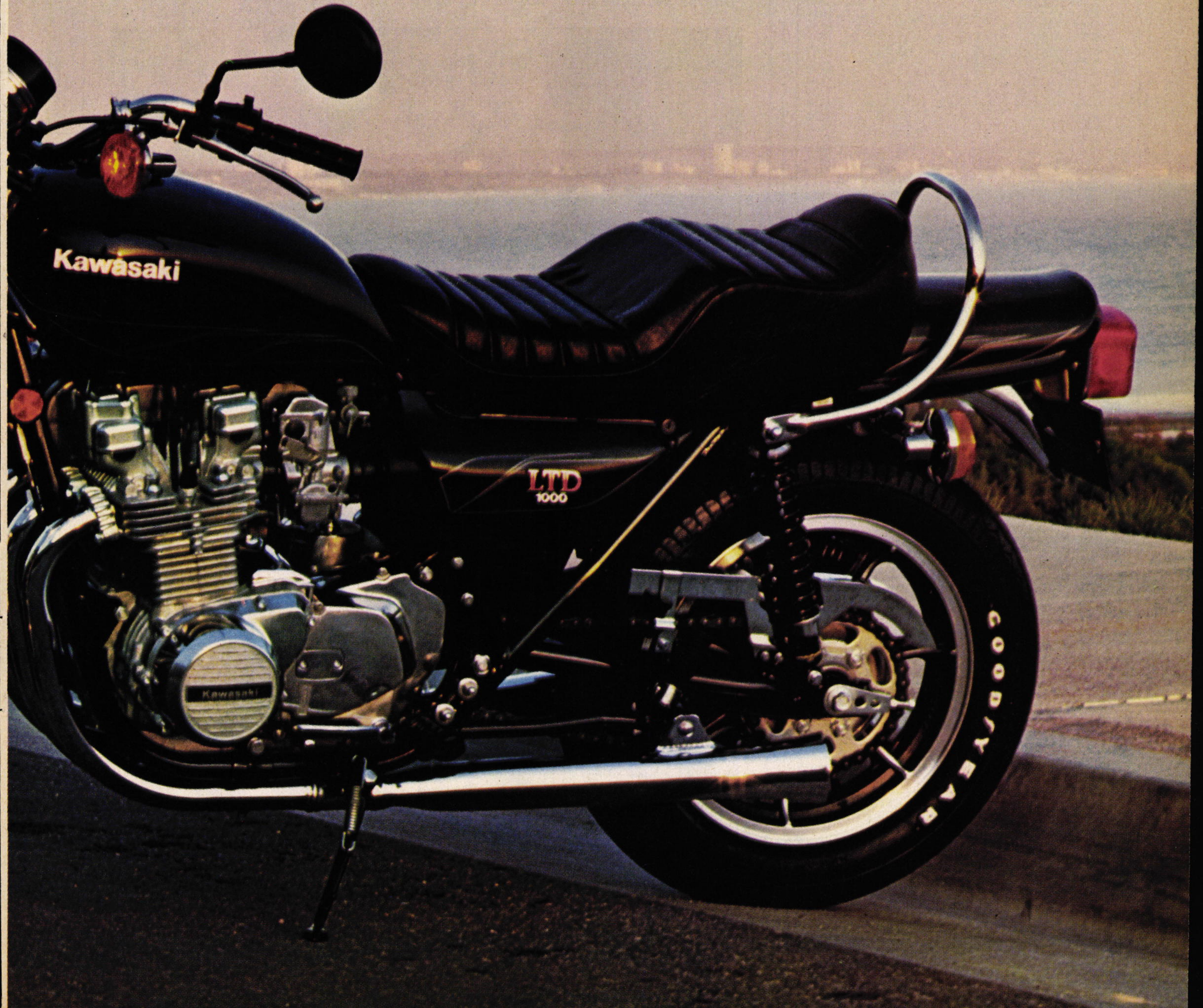
KZ750t LTD (TWIN)

KZ650 LTD

KZ550 LTD

Kawasaki

Don't let the good times pass you by.



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8921	**YAMAHA** singles, XT500 & TT500 models, 76-78	$8.50
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8399	**YAMAHA** twins, 250-400cc, 65-78	$8.50
3724	**YAMAHA** twins, XS360 & XS400, 76-78	$8.50
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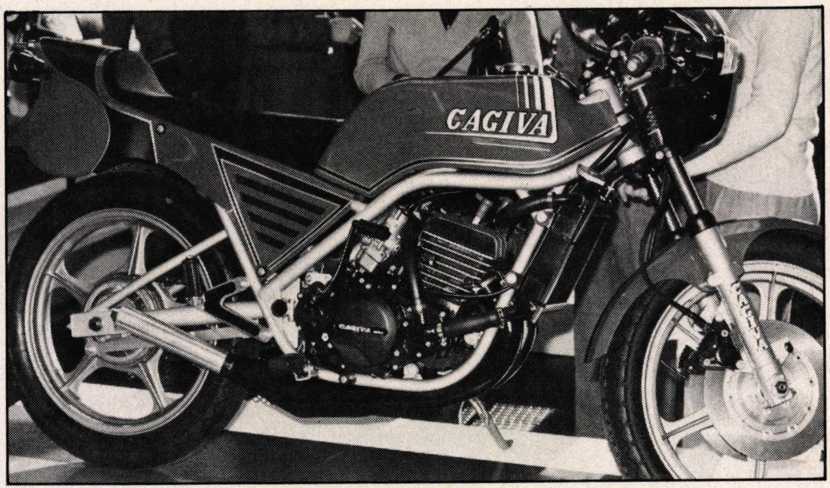
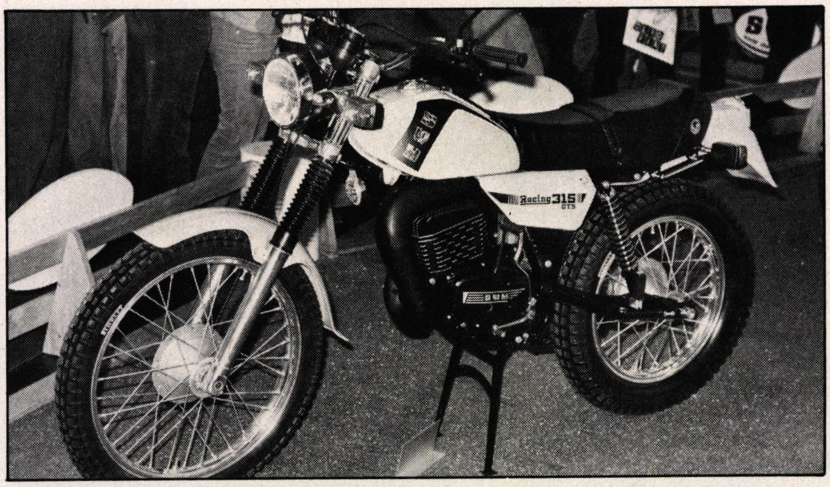
Moto Milan

A handful of hot Italian Aces.



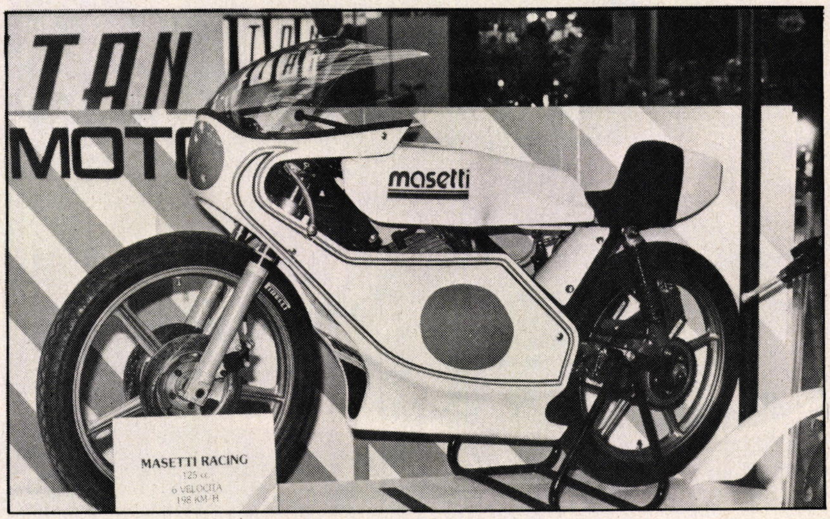
Monoshock 250cc Cagiva follows Yamaha's L/C lead

Another manufacturer finds its way to the water closet.



SWM's dual-purpose 315 features conical hubs and through-the-frame plumbing

The Italian-Austrian partnership takes to the road.

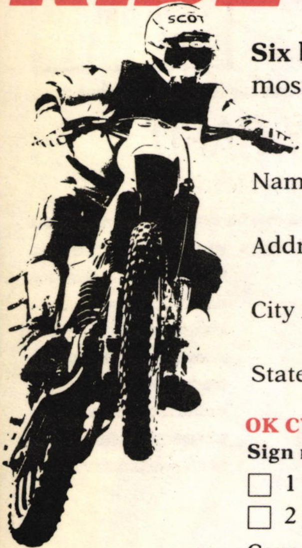


Simonini's 125cc two-stroke Umberto Masetti repliracer

Out of the crate, it'll do one mile per hour per cubic centimeter.

Continued

RIDE FOR LESS



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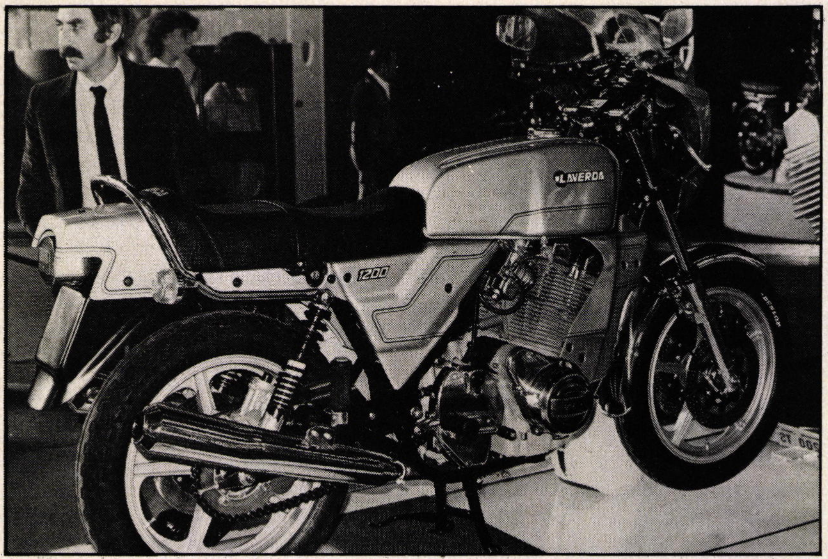
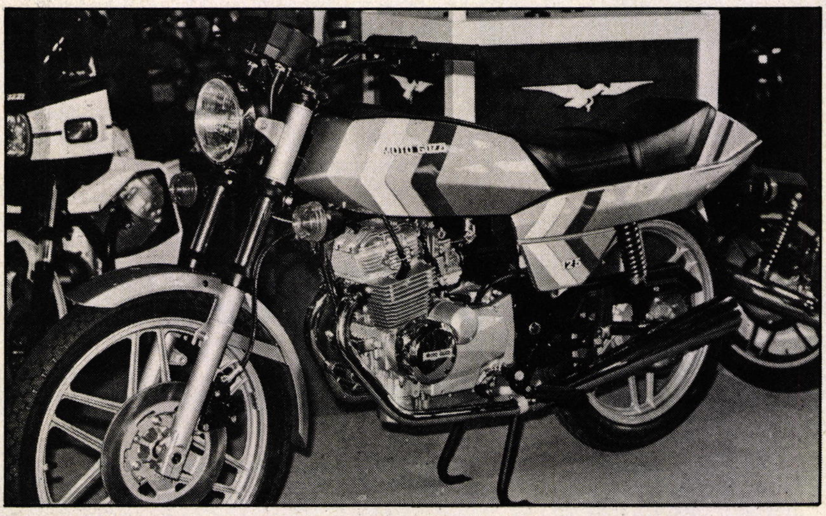


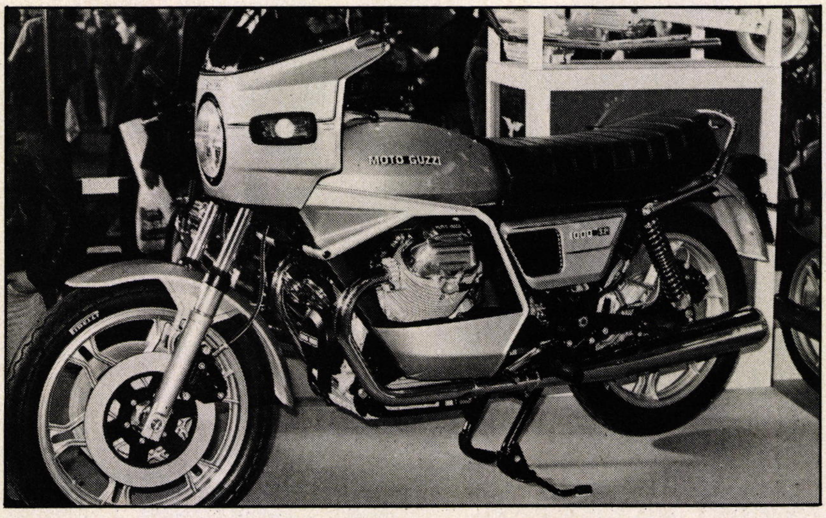
Styling, including handlebar fairing and engine shroud mark Laverda's T/TS

Drivetrain and 1200cc triple come together via an hydraulic clutch.



There's 16 horsepower stuffed inside Moto Guzzi's 125cc four-stroke twin

But more to the point, there's also a claimed 80 mph.



For 1980, Moto Guzzi switched fairings on the vee-twin 1000 SP

A new sheath for the Spada.

Continued

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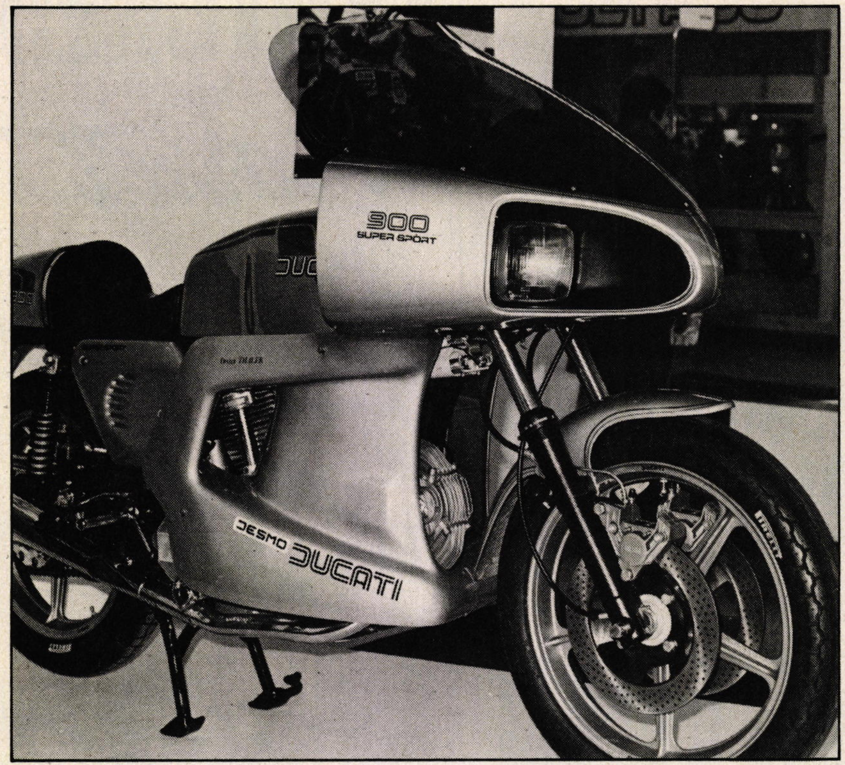


Ducati's full-face fairing ala Thaler of Austria

A Roman nose for the Desmo SS.

- Also at the show from **Laverda** was the new flagship of Moto Laverda's line, the **T/TS.** What distinguishes this 1200 from previous triples is a head-to-toe styling treatment, including handlebar-mount fairing and engine shroud. Another feature incorporated into the bike is an **hydraulically activated clutch.**
- Yamaha's European introduction of its **water-cooled** 350 caused some hearts to beat a little faster. **Cagiva,** the Italian firm that picked up where Harley/Aermacchi left off, showed a bike that's designed to do the same. Cagiva's bike is water-cooled, and like Yamaha's L/C, is a **monoshocker.** The Cagiva entry also carries electronic ignition, a **six-speed** gearbox, double discs in the front with a drum binder at the rear.
- As for **Yamaha** itself, spectators at the show saw the Euro-styled **XJ650** four. The bike shown at Milan is similar to the Special-styled 650 headed to the U.S., but sports **low bars,** large-capacity gas tank and **RD-type styling.**
- SWM was at the show too, and gave evidence of its newfound interest in the dual-purpose market with the 315 GTS and a 125cc version of the same bike.
- The spectators also saw **SWM's** new **250** motocrosser, the **TF/2.** This new version carries over much of last year's specifications, but will be assaulting MX tracks this year with a **new frame** and fork.
- Not absent from the Milan exhibition, **Benelli** displayed its **654,** a 604cc five-speed four,

Continued

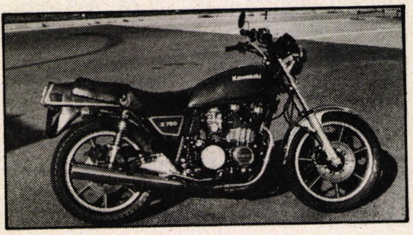
What's the proper
At Champion, we knew
HONDA
2

RIDE/REPORT:
Kawasaki KZ750 Standard

Adding protein to the KZ650 Four.

• Kawasaki has been without a high-performance 750cc sport bike in the American market long enough. A new 750 is on the way to take its place alongside Honda's CB750F and Suzuki's GS750. It won't be the downsized version of the Z-1 sold in the Japanese domestic market, either. Kawasaki has taken precisely the opposite tack, revising its KZ650 to build the lightest and most compact 750—and one of the fastest—on the market.

That light weight comes in part from bucking Honda's and Suzuki's trend toward 16-valve cylinder heads. Kawasaki engineers believe that the performance benefits of such a cylinder head are negligible in the American market, where the majority of riders prefer strong mid-range power. So Kawasaki bored the 650, refined the port shapes and enlarged the valves for an increase in power.


DAIN GINGERELLI

Dain Gingerelli and I rode the new 750 on the streets around the Kawasaki factory in Akashi, Japan, and can attest that the bike lives up to the heritage of the Z-1. Midrange punch is substantial compared to the new breed of 16-valve bikes, yet the engine revs effortlessly and powerfully to redline. Furthermore, Kawasaki has gone to some lengths to refine the vibrations inside its engines. The new 750 felt just as smooth, if not smoother than a KZ650.

Kawasaki has changed its corporate goals to value simplicity and light weight, so the KZ750's chassis reflects very different thinking compared to bikes like the KZ1000 Shaft and KZ1300. The enlarged KZ650 chassis has a wheelbase of just 55.9 inches and a seat height of only 31.4 inches. Even more important, the bike actually is lighter than a comparably equipped KZ650.

As well as agility, the new four will compete on the basis of ride quality. Light weight again is the key, while an air-spring fork and shocks with four-way adjustable rebound damping do the rest. Even a short ride reveals that Kawasaki has made a quantum leap in suspension technology.

As with virtually all Kawasaki street bikes for the new year, the KZ750 also will come in an LTD version. The cruiser model has more front suspension travel, more rake and trail, a 16-inch rear wheel and a radical, leaned-back riding position.

There's a new spirit of confidence abroad at Kawasaki these days. There should be. The new KZ750 is the first Kawasaki street bike to reflect the priorities of the Eighties.

—Michael Jordan

Importer: Kawasaki Motors Corp., U.S.A.
2009 East Edinger Avenue
Santa Ana, California 92711

Category	street
Engine type	four-stroke transverse vertical four
Bore and stroke	66.0mm x 54.0mm
Displacement	739.0cc
Carburetion	four 34mm Mikuni constant-velocity
Front fork / wheel travel	air-spring / 6.3 in. (160mm)
Rear shocks / wheel travel	4-way adj. rebound damping / 3.7 in. (95mm)
Wheelbase	55.9 in. (142.0cm)
Seat height	31.5 in. (800mm)
Weight	463 lbs. (210kg)

Continued

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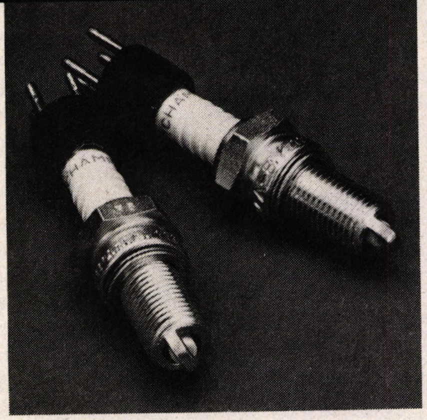

Sound like we've got a thing about heat range testing? We have. That's one of the reasons the Honda factory racing team rides with our plugs. And that's probably why more and more bikers are switching to Champions every day.

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replete with claims of a 400-pound dry weight, 62 hp at 8650 and a top speed of **118 mph.**

- For fanciers of teacup roadracing, **Simonini** showed a 125cc six-speed two-stroke single, the **Umberto Massetti** replica, that rolls out of the crate with a claimed top speed of 123 mph.
- Another Simonini at the show, the **Diamond,** is a **dual-purpose 250** with a diamond-configuration frame. You might see more of this one, too, as Simonini reportedly is looking to **distribute** it in the **U.S.**
- And from **Fantic** comes another veteran of the **Milan** show, a **125 MXer.** The 125 Cross Competition spins out a claimed **28 horsepower** from its six-speed engine, and hits the dirt with **electronic ignition,** just shy of a foot of wheel travel at either end and a claimed dry weight of 200 pounds.

FEDERAL CASES

- If you rested easy when you thought the motorcycle ban in **St. Louis** parks was over, it's time to tense up again. The city has **appealed** Judge Ivan Lee Holt's **decision** and the issue is headed back to the courts.
- In other Lazarus legislation, it appears that California AB1407 still is with us. The bill, known as the **Sagebrush Rebellion,** would return control of BLM-managed land within California back to the state. AB1407 is getting new life by virtue of a **veto override** move.
- Throw out your fancy stencils, friends. Only **AMA-approved** block **numerals** will be accepted on number plates at AMA-sanctioned races this year.
- Also for 1980, the **Winston Series** races will feature something new. It is an **AMA-enforced** 110 dB(A) maximum **sound limit.** That limit represents a five-decibel drop from what was allowed last year.
- In other sound news, a bill in the **Ohio** House would allow individual **municipalities** to **regulate** motor vehicle **exhaust noise.** If the bill, HS460, passes, there's no telling if what passes in one county won't get you **ticketed** in another.
- The wide-open spaces in Canada might not be quite so open in the near future. There's a move afoot by the **Ontario** government to begin a **registration** program for **off-road** vehicles there.
- The item in *Coming Soon* about a fuel-grade alcohol plant opening in **Illinois** is nothing short of appropriate, because Illinois Governor James R. Thompson has **ordered** that all **state-owned vehicles run** on **gasohol** by October. The order won't initiate use of gasohol in public vehicles there, though, since about 12 percent of the state-owned vehicles already run on gasoline/ethanol fuels.
- In other fuel-related news, President Carter now has **authority** to **impose gas rationing.** A plan that Congress okayed allows the president to impose rationing on his own authority, but only when a 30-percent or greater **oil shortage** is in effect—one that is expected to last a month or more. If those two conditions are not met, the president must return to Congress for **specific approval** of another plan.

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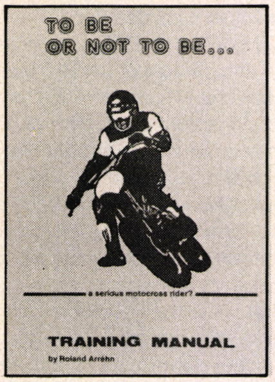
Book Review


TO BE
OR NOT TO BE...

a serious motocross rider?

TRAINING MANUAL
by Roland Arréhn

**TO BE OR NOT TO BE . . .
a serious motocross rider?
By Roland Arréhn
128 pages, $6.95
Available through Husqvarna dealers**

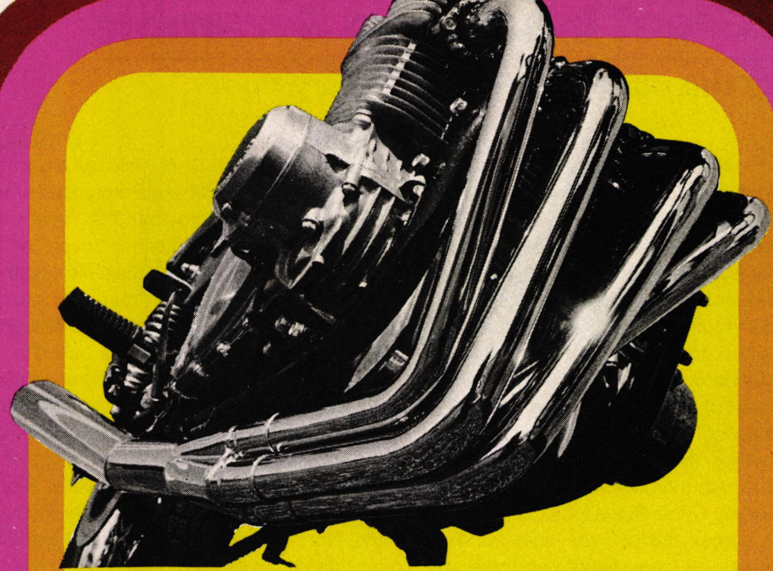
• Pain, exhaustion and bankruptcy all are part of motocross. Fortunately, by reducing the first two, the third can be minimized. Roland Arréhn's book can help.

A rash of physical-training and riding-technique books has surfaced in the past few years, and this offering from the Husqvarna race chief could have been the worst of the lot. Could have been, if it weren't for the wealth of information contained within the soft yellow covers.

Pigeon English translations from the original Swedish text lace the book and make it difficult to wade through. Those that persevere will be rewarded, however. Starting with a basic description of bodily functions, the book soon plunges into deep discussion of metabolic rate, blood-sugar concentrations and finally into a precise physical-training program designed to get your metabolic motor in tune. Following the physical-training section are chapters of riding tips.

Experts must have credentials, and Arréhn's are impeccable. Among other things, he ran the renowned Champion training school in Alfta, Sweden. Mikkola, Noyce and Lackey are just a few of the riders who completed his grueling course and came out better for it. If the advice on training seems a bit too harsh, you've labeled yourself a backmarker. Best set the paperback down and forget about serious competition. This volume was solely written to help riders improve their performance in a long moto.

Few, if any, collectors will choose to grace their bookshelves with this offering; it is poorly printed and contains bad photography. But it never was intended to line the bookracks. With frequent consultations, the diligent reader can free himself from some of the torment usually associated with pro-level motocross. And just possibly from an overdraft as well. *—David Dewhurst*



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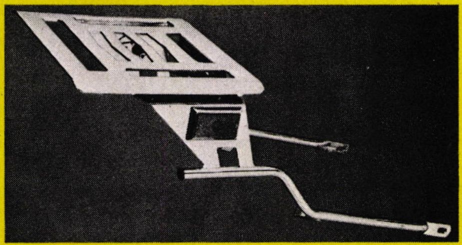
* Cycle Magazine, May 1978



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The Great Insurance Scramble

Taking the puzzle out of the policy.

• There's a rumor going around that some insurance agents are less than thrilled to write policies on motorcycles. The rumor is so widespread that some riders are concerned about where to get a square deal on motorcycle insurance. Unfortunately, their concern is justified. Finding good motorcycle coverage *is* a problem, and although the solution isn't simple, there are standard questions a rider can ask to help solve part of the institutional conundrum.

The Insurance Information Institute cheerfully will outline the system insurance companies use to rate motorcycles. In spite of this, a sample survey *Cycle Guide* took of insurance companies across the country indicates that the system has as many flavors as there are counties. Rating systems within a geographic area will have more in common than those in a single company's scattered branches.

According to the Institute, rating motorcyclists is far less complicated than rating autousers. Riders "are rated by their age, their territory of residence, the amount of liability or collision coverage desired, and in some states, by the weight of the bike. There are no driver-training, good-student, safe-driver, purpose-of-use (except commercial) or mileage factors to consider when determining a motorcycle rate." As for age, the Institute says that most states divide motorcyclists into either "over" or "under" 30 years, with a few states allowing those who are under 30 but married into the "over-30" category. Both of these categories are given a percentage multiple based on the displacement of the would-be-insured motorcycle's engine. Generally, the multiple used for the younger group is 15-percent higher than that for the over-30 group. The states that classify according to weight (Delaware, Florida, Maine, New Hampshire, New Jersey, New York, North Carolina, Virginia and West Virginia) divide the bikes into categories of over or under 300 pounds rather than separating them into classes according to displacement. The percentage multiple for lighter motorcycles, however, is *double* that for bikes weighing over 300 pounds. The reason given for this variance is the smaller bikes' greater involvement in accidents, probably due, says the Institute, to less rider experience.

The rating system for collision coverage is similar, also based on an age classification. Cost-new categories become the basis for the multiple of this percentage: $0-400; $401-600; $601-900; and over $900. These prices refer to the manufacturer's recommended selling price and not the actual purchase price. There are other types of policies available, such as medical coverage and passenger hazard, theft and combined additional coverage. And there is short-term rental insurance, which has no age factor but may cover owner liability only. These types of coverage, taken for granted when obtaining auto insurance, are difficult if not impossible to obtain for many motorcyclists. And even within basic liability coverage ratings differ significantly among insurers.

Probably the first question to ask when hunting for coverage is whether or not you also have to maintain a car-insurance policy with the company. Though most of the companies *Cycle Guide* surveyed said that it is not *necessary* to also have your car insured with them, it can reduce the cost of a motorcycle policy. And some insurers (Aetna of Houston, Allstate and State Farm of Los Angeles and State Farm of New York City) refuse insurance to bikers who don't have other business with them.

There isn't much argument regarding what insurers consider the proper "personal" virtues. A good driving record, an age break at either 25 or 30 years (marriage may boost you into a better category) and a current driver's license win points with everyone. Aetna of

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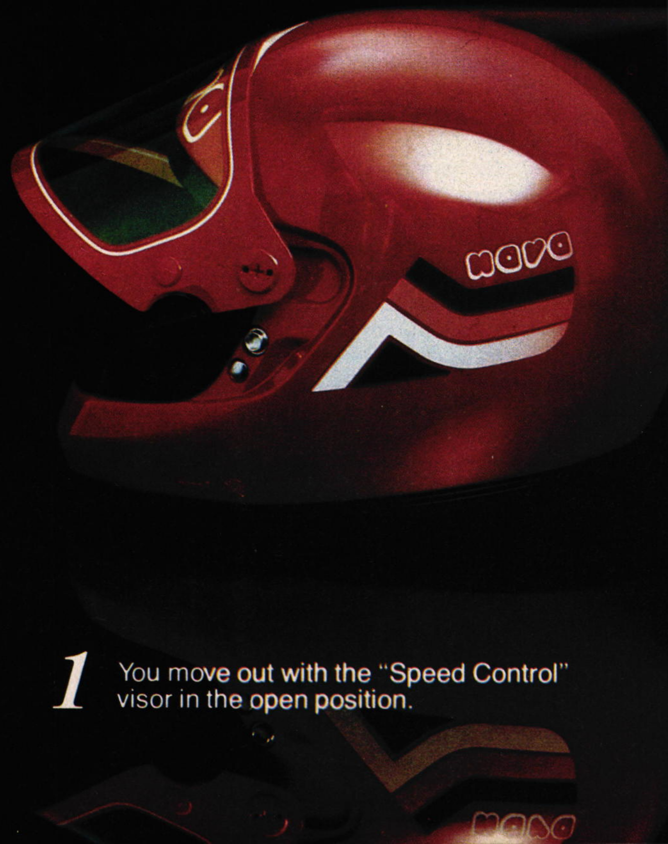

1 You move out with the "Speed Control" visor in the open position.

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MIC

Houston also considers the year and model of the motorcycle and State Farm of New York City counts place of residence, vehicle use and driver training. If personal qualifications seem almost too "pat," rating of the motorcycles themselves will seem chaotic.

Although many insurers classify according to displacement, some of them will not insure the larger bikes at all. Aetna of Houston, for instance, admits to expensive policies for motorcycles, and will not insure a motorcycle with a displacement greater than 650cc. New York City's State Farm has a similar attitude. There, a motorcycle automatically is placed in the "assigned risk" category. They also are working on special ratings for the Honda CBX, the Yamaha XS1100 and other hyperbikes. Farmers Insurance of Houston makes the break at 750cc. Motorcycles of larger displacement have, according to Farmers, "much higher" rates due to theft. Allstate of Los Angeles agrees: "The larger bikes mean instant theft." The company seldom will insure them, but if it does, rates are high.

Owning too small a bike also can be a problem, especially if your state classifies according to weight. Besides this, however, is a recent thorn in the ratings system: the popularity of mopeds. Mopeds presently are insured along with motorcycles even though they clearly are a species unto themselves. At Farmers Insurance of Los Angeles, the ratings for a 250cc bike are half that for a 500cc bike, but the best deal is in the 500cc-750cc classification. This is true for most companies. Those riders who own mid-sized bikes generally are able to obtain the policy they need. But size isn't the only determining factor.

Custom bikes pose a special problem, according to insurance agents. Farmers Insurance of Houston is one company that won't touch custom bikes or choppers. And although State Farm of New York City will insure customs, it can't "fix" the value; the policy must be based on the original price of the motorcycle. USAA's rating regards how the bike is used: If a custom model is ridden only for pleasure or for commuting, USAA will insure it. Custom owners have even fewer policy options than riders of monsterbikes—and available coverage is minimal.

For any motorcycle, more than liability coverage can be difficult to obtain. Some insurers, such as AAA of Los Angeles, won't give medical coverage to motorcyclists. The state of New York doesn't *allow* the sale of medical coverage to motorcyclists. Allstate of Los Angeles highly recommends physical damage for "large, costly bikes" but ironically rarely will insure such a motorcycle. To all this confusion there is one possible alternative: Turn to the independent agent.

The independent agent often handles motorcycles exclusively. In representing the client/rider, he usually will find the least-expensive quote based on his client's needs and nature. There are other benefits as well. Eagle Insurance of Los Angeles, for example, will pass on discounts after a year of no claims and will review the policy to see if policy alterations or the rider's needs have changed enough to warrant switching to a different company. The number of tickets is not a problem, this agent said, for the company obtaining a three-year "filing" from the Department of Motor Vehicles will guarantee minimal (liability) insurance for that period. But even with an independent agent custom bikes are a problem.

The larger problem of insurance is simple. Insurance companies don't seem to want your business. *You* have to convince them that you're worth insuring. One agent for State Farm of New York City flatly stated that his company does not want to handle motorcycles. Based on the *Cycle Guide* survey, this attitude sadly is a prevalent one, reflected in the laws that force companies to insure motorcycles owned by their auto policy holders and in the baffling rating systems themselves. If theft, for instance, is considered the greatest demon, why is it that in states which classify according to weight, those bikes which are smallest (and cheapest) have the highest premiums? This, undoubtably, can be rationalized, but only by an actuary. Not a motorcyclist.

—Merry MacTavish

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2 At near 35 mph, visor automatically lowers to vertical position, one inch from the helmet.

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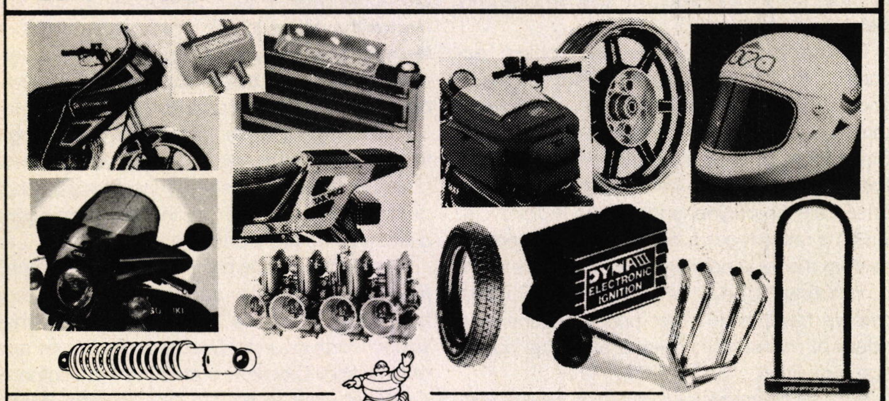

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GUIDE LINES *Continued*

• The Motorcycle Industry Council reports that the Senate Appropriations Committee recently approved a **$400,000** budget request for an **NHTSA rider education** program. The outcome on the request is in doubt, though, since the U.S. House recommended that the figure be **cut in half.**

• No, **AMPAC** is not some arm of the Seventh Fleet, even though it might sound like it. The acronym stands for American Motorcyclists Political Action Committee. This new AMA group has been formed to **raise** and **distribute** campaign **funds** to pro-motorcycle political candidates who are running for the Senate and House.

HARD CASH

• Last month, this column contained an item on a pooled fund to support AMA **regional** motocross racing. The support program is set up so that each of the Big Four manufacturers contributes **$25,000** to the **fund,** which then goes to pay $3000 of the $4888 required to be posted per regional race. Only holders of AMA **Pro**-class licenses are eligible to collect.

• In case you were wondering, the 39th **Daytona 200** carries a purse of **$80,000.**

• And to be held in conjunction with the festivities at Daytona, there's a series of eight **dirttrack** races that **Harley-Davidson** will sponsor to the tune of a **$20,000 point fund.** The fund is open only to AMA Expert-class riders, no Harley factory riders can collect from it and the winner's share should be around $10,000.

• And in keeping in the spirit of help from the manufacturers, **Husqvarna** dealers can fill you in on a **support program** for motocross, enduro and ISDT-type two-day races.

• File this item under free things. **MXL/Hydron** is offering a small way to make April 15 at bit more palatable this year. MXL will hold a **drawing** on the 15th, with the winner getting his/her choice of any **motorcycle** or snowmobile worth up to $3000. MXL dealers have the details, but don't get leisurely about checking this out. **Entries** for the contest have to be in by the end of March.

RUMORS

• Despite the flurry of new-model introductions, there's still some fascinating fodder for the could-be factory. One tale has **Kawasaki** paying even more rapt attention than usual to the 400cc market. Don't be too shocked if a four-stroke **400cc four** with a big "K" on the sidecovers rolls up next to you at some future stoplight.

• And in a synthesis of engineers' notes, the slip of a few tongues and a liberal dose of wishful thinking, if that **new** four were a **Uni-Trak** model, it wouldn't come as a complete **surprise.**

• And in more talk from **Kawasaki,** there's word of a factory effort to revamp the KZ750 **twin.** Reportedly, plans are underway to recast the twin into a single-overhead-cam configuration for an expected **greater power** output.

Continued

RIDE/REPORT:

Yamaha TT250G

A mini-thumper for the fun of it.

Importer: Yamaha Motor Company, U.S.A.
6555 Katella Avenue
Cypress, California 90630

Category	trail
Suggested retail price	$1459
Valve arrangement	single overhead camshaft
Displacement	249cc
Carburetion	one 30mm Mikuni slide/needle
Gearbox	5-speed
Front wheel travel	9.1 in. (230mm)
Rear wheel travel	8.1 in. (205mm)
Seat height	33.9 in. (860mm)
Weight	231 lbs. (105kg)

• Yamaha's new TT250 is supposed to be a playbike, pure and simple. But one look at its credentials, including a monoshock swingarm and leading-axle fork suggests it to be willing to tackle terrain frequented by ITs and King-Daddy thumper, the TT500.

I rode this 249cc single for the first time at Yamaha's motocross test track in Japan, and in ankle-deep mud the TT250 showed a willingness to pull strongly in all five gears, even at low rpm. Yamaha claims 21 hp at 8000 rpm, and maximum torque of 15.6 ft.-lbs. at 7000. These high-rpm figures aren't surprising, since bore and stroke are 75 x 56.5mm, made even more significant because the overbore dimension produces a short engine which facilitates the use of a monoshock.

DAIN GINGERELLI

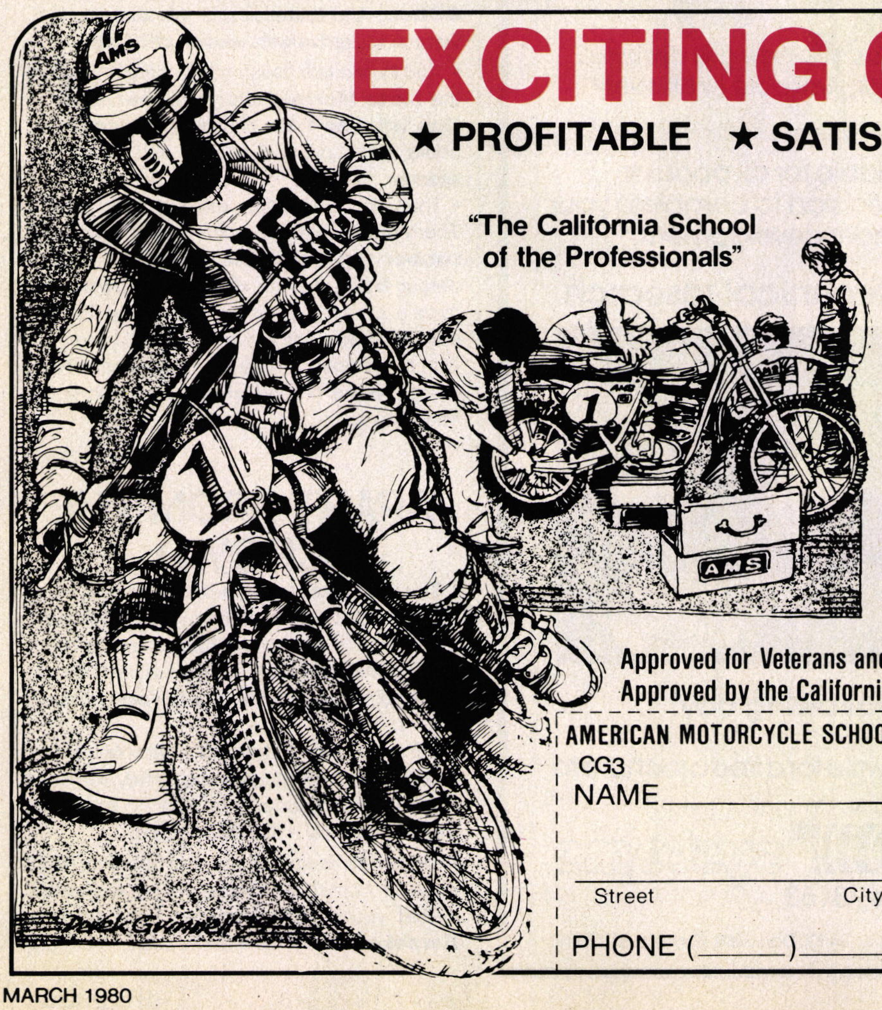
A single engine counterbalancer keeps engine vibration bearable and weighs less than two, as are used on Honda's XR250. For easy starting, the 30mm Mikuni has an accelerator pump, and an automatic compression release assists the kickstarter, much like the one on the XR250.

Yamaha especially was concerned with seat height, since this bike is aimed at the not-so-serious dirt market. Thanks to a seat height of approximately 33 inches, riders who wear Size M riding gear should have little problem putting both feet flat on the ground while sitting on this playbike.

Don't think that wheel travel is sacrificed by a low seat height, though. Yamaha claims more than eight inches at the front and rear. Although I feel the suspension is too soft, bottoming-out at points I didn't suspect it would, it recovered quickly through whoop-de-do sections.

Yamaha claims a lightish dry weight of 231 pounds, arrived at by liberal use of plastic on the TT. Further weight savings are traced to such items as alloy rims (21-inch front, 17-inch rear) and the rear six-spoke sprocket. Welcome, too, is the quick-change rear axle, identical to those on the IT-model Yamahas.

An optional lighting kit for the TT available through Yamaha dealers will extend your riding time into the wee hours. However, don't start thinking of the TT as an enduro competition machine; Yamaha displayed its intentions by leaving off an odometer. But never mind, you'll have too much fun with this bike to worry about competing. As further evidence that the TT was built for play, the bike doubles as the world's largest flask; the front number plate does double duty as a half-liter liquid container. *—Dain Gingerelli*



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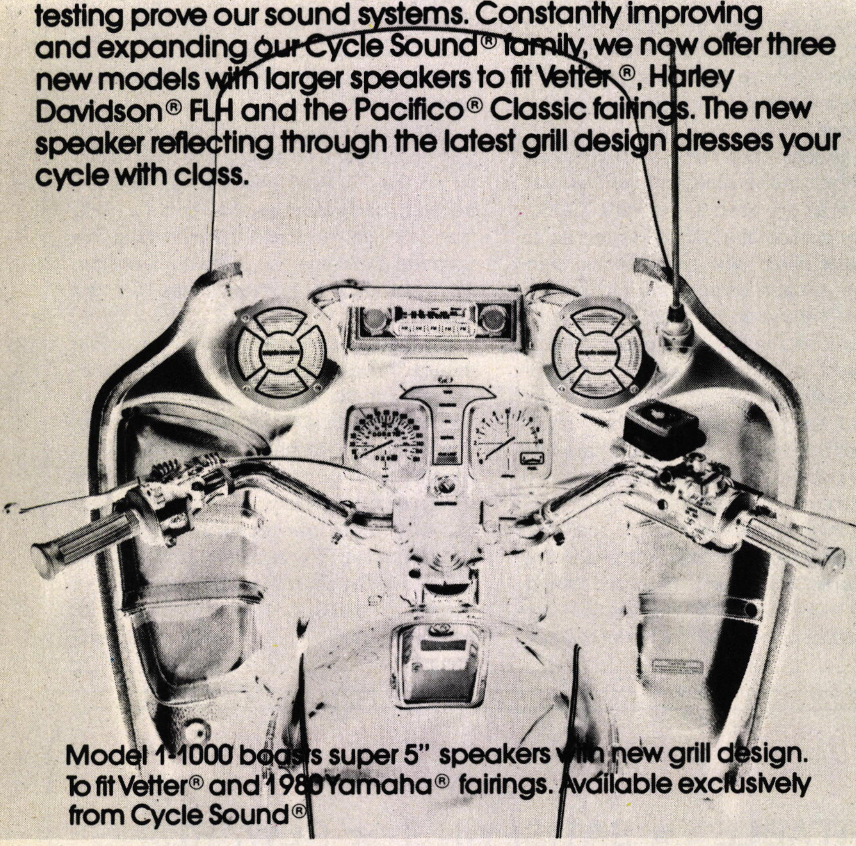

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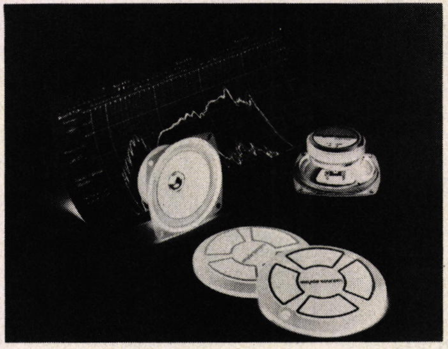

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GUIDE LINES *Continued*

• Switching manufacturers, from **Suzuki** comes word that the new 400cc four-stroke **street single** that debuted at the Tokyo Motor Show is a prime candidate for a spring introduction on this side of The Pond.

• News from Honda suggests interesting things in store for **motocrossers.** The talk centers on the possibility of a **water-cooled CR250** in the near future.

• And to bolster what you might have heard elsewhere, information continues to circulate about **Honda's** interest in **four-stroke MXers.**

• Further fueling the four-stroke fire is news that **Husqvarna's** experimentation with **500cc four-stroke** MXers reportedly is progressing.

• A particularly fast-moving rumor has at least one of the major **turbo** manufacturers experimenting with an **electronic boost** control to save weight. The device reportedly also allows for constant adjustment to racing situations.

• Other talk of turbocharging focuses on the Moto **Guzzi** factory, where **unconventionally aspirated** V-35s and **V-50s** reportedly are in the wings.

• While you're in **Guzzi** mode, apparently more than passing consideration is being accorded a V-series **650;** one with an **eight-valve** head. Reports indicate that the four-valve-per-cylinder setup could find its way to the other V-series Guzzis.

• Other word from Italy suggests that **Ducati** soon will boost its vee-twin **Pantah** to **600cc.** And there also is talk that the U.S. version will arrive with **water cooling.**

• And in one last Italian tidbit, there's talk that the **Moto Morini** factory's **experimentation** with **vee-twin** playbikes and **enduros** could bear production-line fruit later this season.

• Triumph, too, is not exempt from rumor. There's talk that the much-touted Bonneville **rubber** engine **mounts** have had to make a detour **back to** the **drawing board.** But there's a happy ending to this story. Reportedly, the bikes will arrive in the U.S. later, but with redesigned mounts, a higher-capacity oil pump, **more** ground **clearance** and some new colors.

APART FROM THE CROWD

• This time **next year,** will everyone be trying their hands at door-slammers? As if following in the footpegs of Kenny Roberts and others, Jimmy **Weinert**, the old man of motocross, reportedly is considering a go at **four wheels** instead of two.

• Let's talk superlatives. In what must be the definitive version of **wet** and **wild,** someone at Kawasaki reportedly is working on a **Jet Ski** powered by a **KZ900** engine.

• Or if water is not for you, the February 1979 issue of *Homebuilt Aircraft* will—you guessed it—tell you all about how to hook up your **Kwacker to fly** the friendly skies. ●

ROAD TEST:

Honda GL-1100 Interstate

Let it be known by its CB handle—King of the Road.

BY MICHAEL JORDAN

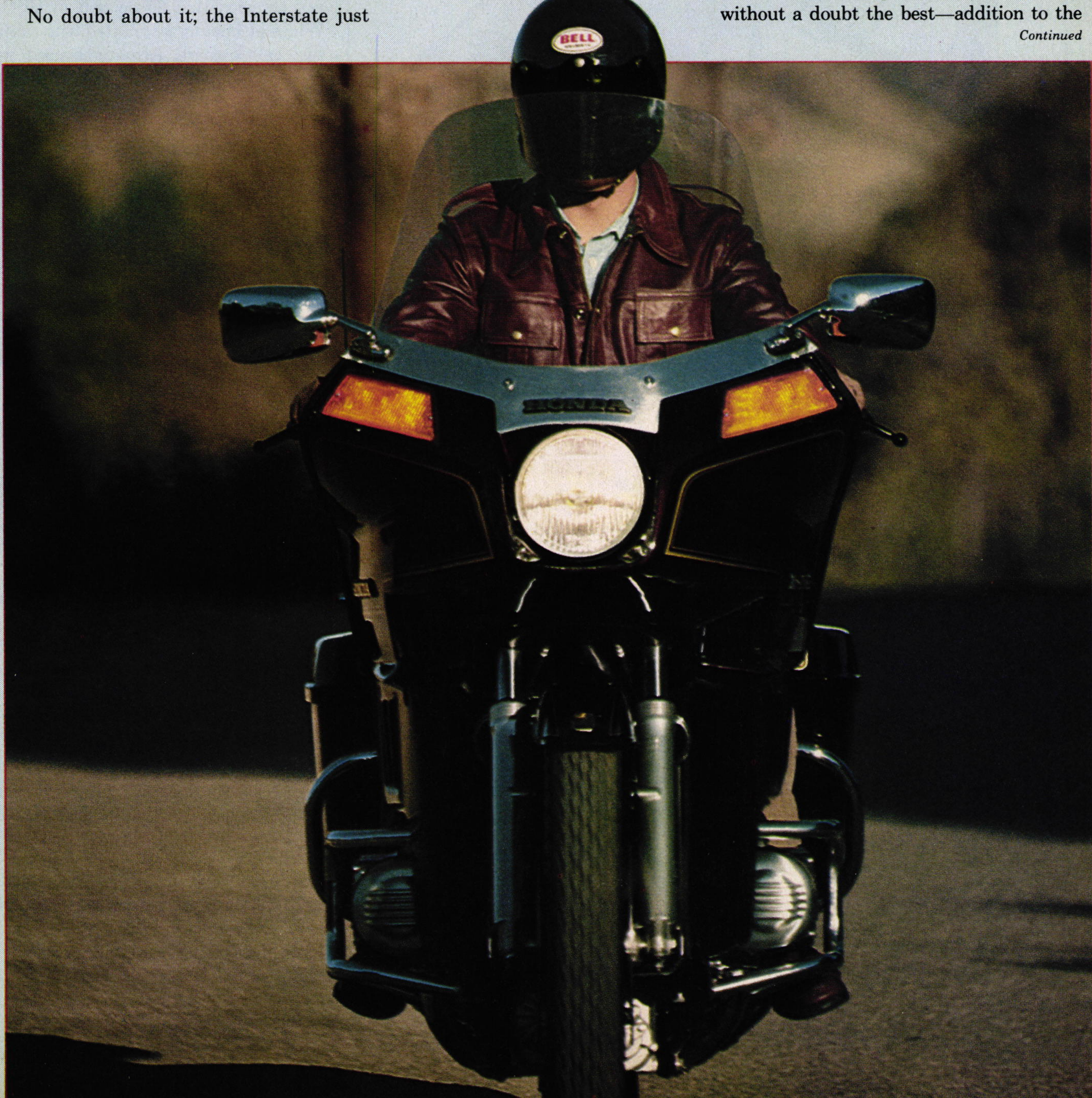
Honda's new Interstate makes all other forms of vacation transportation obsolete. Never mind your American Airlines brochures; there's a better inflight movie unrolling beyond the Interstate's windscreen. Forget your Amtrack timetable; the Gold Wing is more reliable than a locomotive and it runs on time besides. Leave your Winnebago at home; the GL-1100 gets better fuel mileage, is more fun and has a better entertainment console.

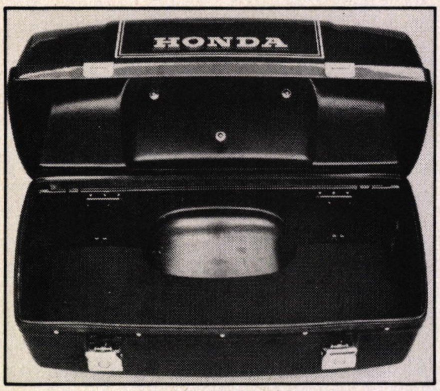
No doubt about it; the Interstate just might change the way you feel about touring bikes. A skeptic will look at the fairing and bags, mutter about the effect of all that weight on handling and ask the purist's most-asked question: "Why don't you just drive a car?" Let him. If you're on an Interstate, you can reply, "Because this motorcycle is more comfortable than a car." And if you want to call the guy a blockhead in the bargain, feel free. In fact, please do.

The Interstate represents the latest—and without a doubt the best—addition to the

Continued

PHOTOGRAPHY: RICHARD GEORGE





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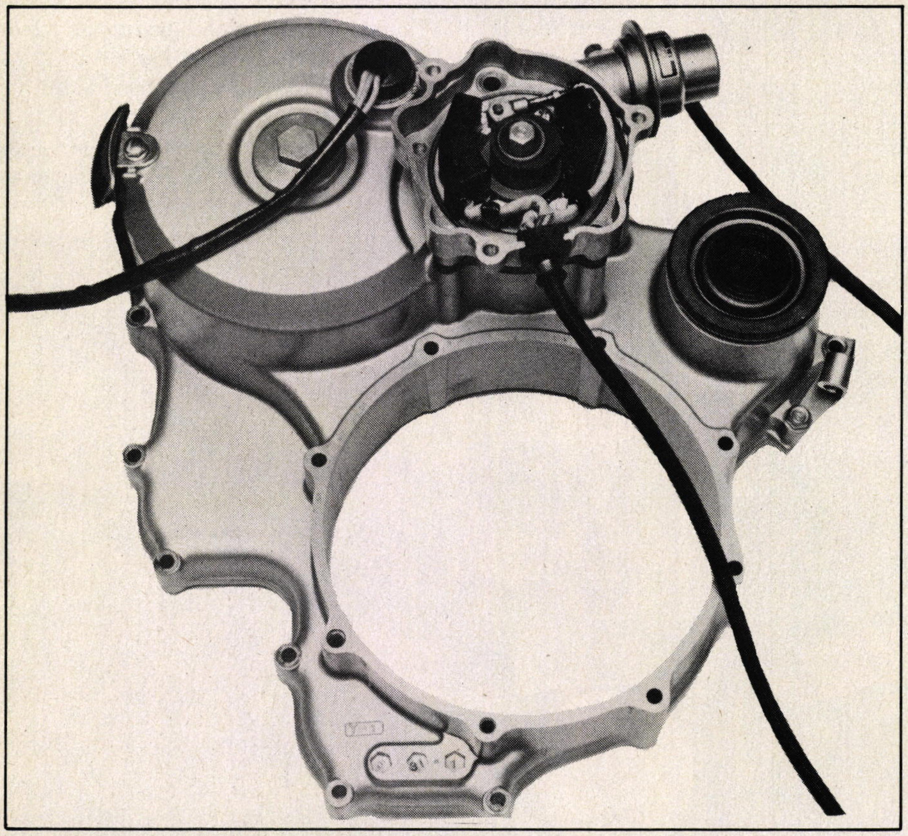
Each saddlebag affords 35 liters capacity

Maximizing protection with carry-bags.



Crank-driven, transistorized, breakerless ignition on engine's aft cover

Vacuum line (center) rotates pickup plate and dials in ignition timing.

Gold Wing's new flip-top tank with twin hatches and without instrumentation

Rationalizing tank-bag mounting while improving gas-cap access.

new breed of "turn key" touring rigs. That's the terminology currently used to describe factory-built long-distance bikes meant to be ridden directly from the showroom floor into the horizon. Harley-Davidson, BMW, Yamaha, Kawasaki and Suzuki each can provide you with its version of a touring bike, but the Interstate is different—not in overall concept but in excellence of execution. It is the standard by which the others will be measured from this moment forward.

This ultimate in fully-optioned Gold Wings is the end result of a two-year program of design and development that began in 1978, the year in which Honda introduced a recalibrated version of the original GL-1000. An exhaustive marketing survey was initiated to plumb the depths of the Gold Wing buyer's consciousness. Among other things, that survey revealed that 85 percent of all Gold Wings ultimately were fitted with fairings by their owners. Also uncovered were owner complaints about the GL-1000's marginal Gross Vehicle Weight Rating (GVWR), its harsh suspension and a number of problems encountered when fitting certain accessories.

With this information in hand, Honda set out to build a touring rig that dealt with those problems and had every item on the option sheet checked off—including flow-through ventilation. At the same time, weight distribution and high-speed stability were treated just as seriously as fit and finish. The goal was to build a touring bike with few functional compromises, an image-maker that would account for at least 25 percent of all Gold Wing sales. The options were to be state-of-the-art, the mechanicals would throw back the threat of Yamaha's XS Eleven. The combination would, in theory at least, be the most thoroughly engineered touring motorcycle for sale anywhere.

In the GL-1100 Interstate, Honda unquestionably has attained its goal. For example, "fully-dressed" in Honda's vocabulary means more than just a few random bits of fiberglass or plastic pasted to a bare chassis. The fairing owes its shape to hours of study in the Yatabe wind tunnel built by Japan's department of transportation. The windscreen has 1.5 inches of height adjustment, and the optional accessories include everything from an altimeter to a combination AM/FM stereo radio and a rider/passenger intercom. The plastic, color-matched saddlebags are mounted as close as possible to the centerline of the motorcycle to minimize their effect on handling. The travel trunk is quick-detachable with two helmet locks integrated into its mounting brackets. And there's even a massive cast-iron weight bolted to the fork tubes in place of the headlight that is meant to cut down on those scary front-wheel shimmies that can occur on motorcycles carrying a loaded-down touring trunk. (See page 52 for further information about the Interstate's accessories.)

As important as the Interstate's option list is the way all of that gear works with the rethought Gold Wing instead of against it. Hammer a fully-laden Interstate through an 80-mph corner and it tracks just like a normal motorcycle instead of boogalooing like a hippo in heat. The Interstate's good manners come in part from integrating the touring bits into the motorcycle's behavior pattern as carefully as the pinstripe on the fairing dovetails with the striping on the American-styled "dummy" fuel tank. At the same time, though, the Gold Wing itself has been substantially refined.

One of the more important contributors to the GL-1100's reborn proficiency is its greater power. The first edition in 1975 had plenty of beans, but the horsepower and torque peaks both were so high in the rpm range that dealers and riders alike can be forgiven for at first thinking the GL was a Z1-eater. Even the rethought 1978 version, in which different cam timing and 1mm-smaller carburetors emphasized torque over horsepower, didn't do the job. Basically, the Gold Wing motor has always been pitifully unresponsive to anything but a downshift or two when *real* acceleration has been called for.

That's no longer the case with the new Wing, and the "GL-1100" sign on the cylinder heads is your first hint as to why. But much more than a 3mm increase in bore size has been transferred from the engineer's drawing board. For one thing, the entire drivetrain has been substantially strengthened, from larger crank journals to an increase in clutch friction area and a new, more-positive CB750-style clutch-release mechanism. Elsewhere, the primary chain is 25 percent wider and a stronger universal joint has a 25-percent longer life expectancy. Even the substitution of a lighter CX500-type final-drive gear case at the rear wheel adds strength.

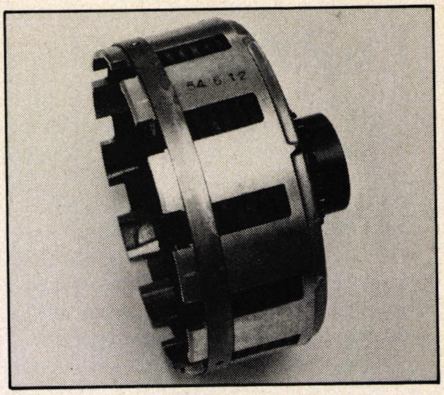
More than just a displacement boost accounts for the way the Gold Wing lunges forward with newfound midrange power, however. The Keihin constant-velocity carburetors have shrunk yet another millimeter in size, which when combined with more displacement makes for better low-end power. And like most new Honda street bikes, there's an accelerator pump to aid off-idle response. Valve size remains the same as before, but the duration of both the intake and exhaust valve cam timing has been lengthened, and intake valve lift also has increased slightly.

As Honda interprets these changes, the juggled cam timing and lift help the GL not only recapture the five horses lost in the 1978 model but gain 2.5 *more*. The increased displacement accounts for giving the new GL slightly more peak torque than the '78 model. Honda R&D Director Syoichiro Irimajiri says a four-valve cylinder head at first was considered as a way of pumping up the Gold Wing's performance, but at the modest rpm ranges used in touring the boost in power would have been very slight and extremely costly.

As it turns out, one of the most appreciated assets of the new GL-1100 engine might be the simple use of an ignition vacuum advance like that used to such good effect on Yamaha's XS Eleven. First of all, the cam-driven breaker points used on all previous GLs are gone, replaced by a set of solid-state transistorized pickups which are located on the rear of the crankshaft, back where the original Gold Wing's kickstarter gear used to live. And in addition to an ordinary centrifugal advance is a vacuum diaphragm which is activated via a hose connected to the No. 3 carburetor. The diaphragm can, through a short linkage hooked into a moveable pickup plate, regulate the ignition timing according to demand, thereby eliminating the timing compromise forced by ordinary centrifugal-only systems.

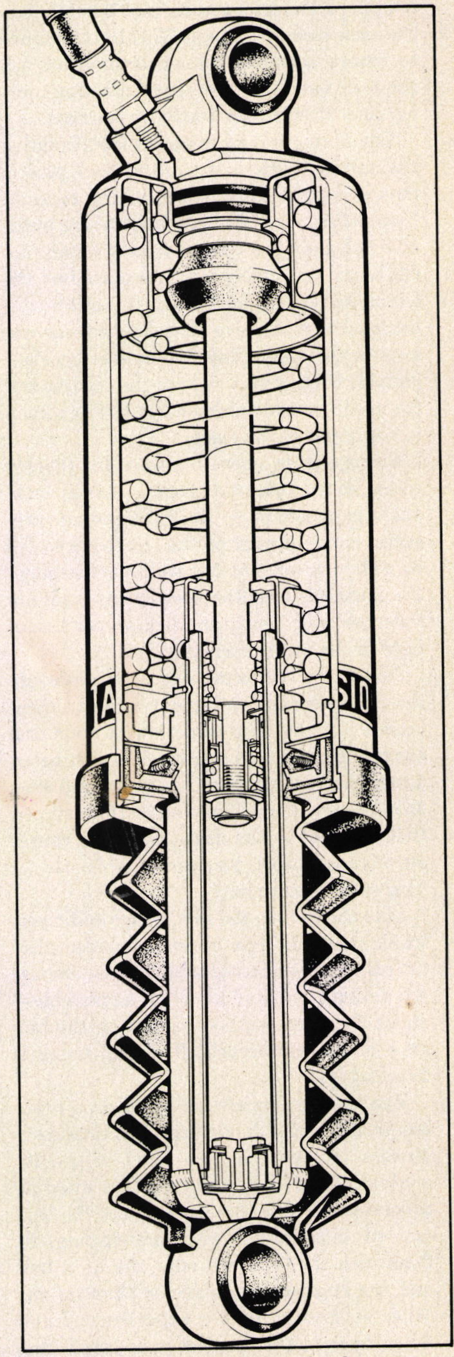
As a result, the Gold Wing accelerates with nearly XS Eleven-like thrust in a roll-on situation. Downshifting is no longer obligatory; the 1100 meets your demands with dynamo-like power as well as smoothness—even when you gas it at 2000 rpm in top gear. The fact that Yamaha's XS Eleven Dresser runs the quarter-mile in 13.13 seconds at 105 mph while the Interstate turns 13.40 seconds at 96.9 mph tells you how competitive the GL-1100 has become in terms of real-world speed.

Due to the location of the new ignition, the engine had to be lengthened slightly and the frame, in turn, required a slight stretch. But as in other aspects of this motorcycle, Honda didn't content itself with quick-and-dirty frame surgery, it revamped the entire chassis. The wheelbase grew 2.4 inches, half of which is in the stretched engine and the other half due to a 30mm-longer swingarm. Like the 63.5-inch wheelbase, the steering geometry emphasizes straight-line stability, for the steering head angle was kicked out more than a degree and the front-wheel trail increased 14mm. Tapered roller bearings do



Larger-diameter clutch friction plates

Now strong enough for 700-pound bike.



Ultra-comfortable air-spring shock

Aided by four-stage FVQ damping.

Continued

The Package

• You'll forgive me if I begin to wear a baseball cap whenever I haven't got my Simpson helmet on. It's just that every time I climb into the cab of my Hondabilt Interstate, I start to feel like a long-haul trucker. And why not? The Interstate is equipped with as many convenience accessories as any $50,000 rig from Peterbilt—and like a big truck, the accessories are engineered into the package.

Honda believes that showroom browsers will appreciate the fact that the Interstate accessories are designed to fit just one bike and not 21 different ones. And that a fairing that doesn't rattle on its mounts and is painted on the same assembly line as GL-1100 fuel tanks to insure accurate color-coordination will convince even the most discriminating touring rider that Honda knows its business.

The fairing is easy to appreciate. Building the fairing with injection-molded plastic makes it light without sacrificing rigidity. Two different windscreen heights are available and both are formed from shatterproof GE Lexan polycarbonate. Like plexiglass, the Lexan will yellow, but only on its surface, so a common non-abrasive household cleaner can remove the stain. Two automotive-type adjustable vents direct air into the cockpit and the headlight can be aimed by twisting a knob in the center of the dash.

Storage is an operative word for touring riders, so the Interstate fairing has a lockable compartment on the right and an easy-access compartment on the left that's sealed by a vinyl cover. Another welcome feature of the fairing is that the speedo and tach are reflected only faintly and below your line of sight in the windscreen at night.

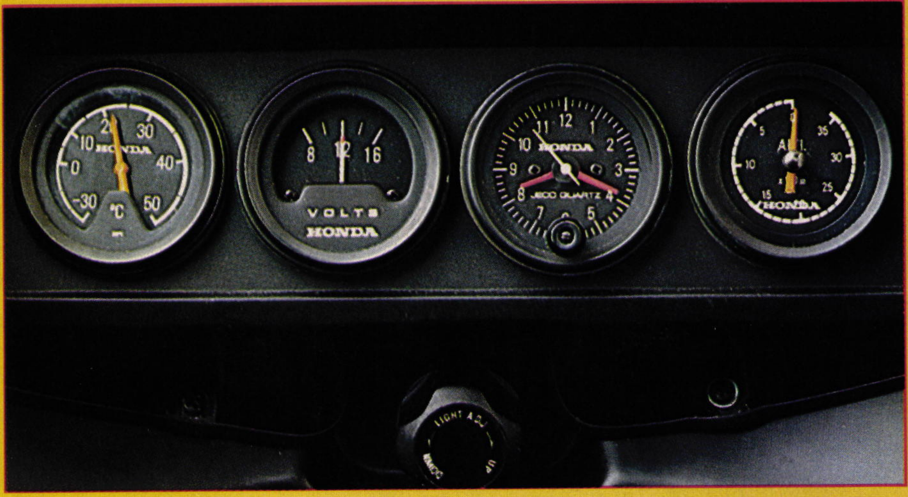
Just like a White cab-over, you can equip the Honda cockpit with plenty of instrumentation, thanks to a selection of four dial gauges. There's a quartz clock, a voltmeter, an ambient air temperature gauge and even an altimeter. They fit into an instrument pod that attaches to the dash. Since the gauges are standard size, you presumably can fit your own if you prefer.

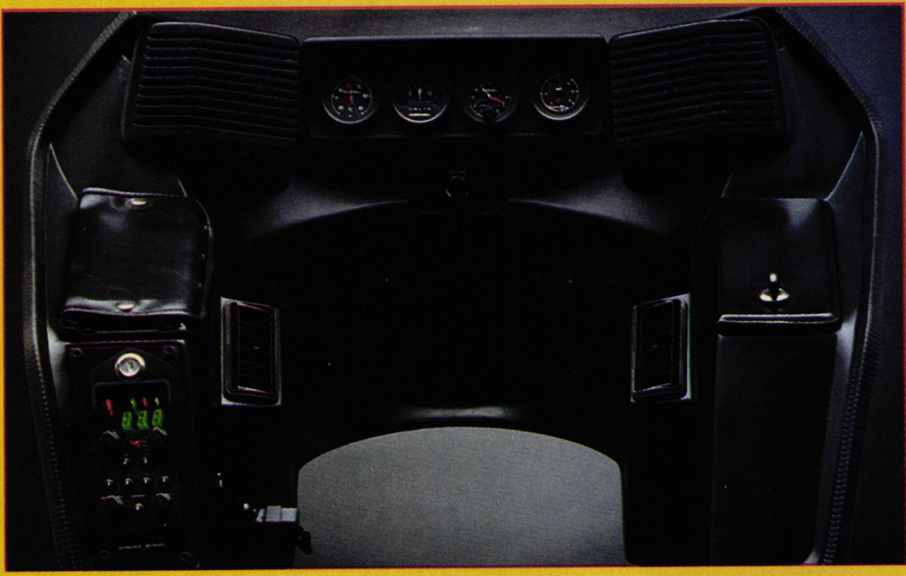
Like the fairing, the saddlebags and travel trunk are made from injection-molded plastic. All have detachable tops. The saddlebags are designed to hold as much as possible—about 35 liters—without upsetting the balance of the motorcycle. The trip trunk is detachable.

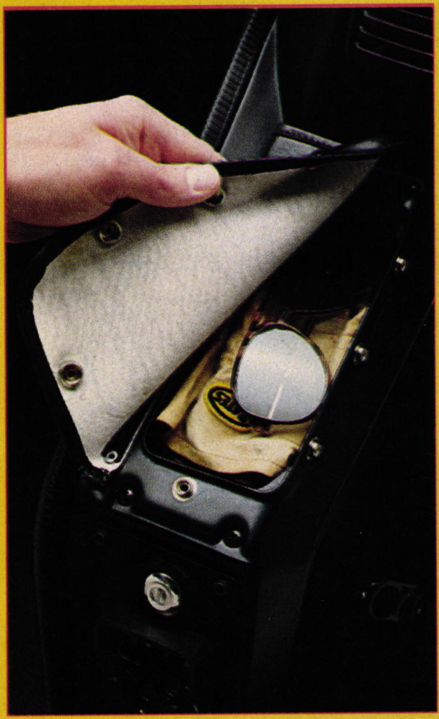
Weatherproofing always has been a problem with detachable-top bags, but Honda engineers believe the high level of quality control afforded by the injection-molding process will insure that the edges of the bags (sealed with rubber weatherstripping) fit flush with the tops. Actually, the fit is taut and the engagement is deeper than on any other such bags in my experience. Inner nylon bags further protect your cargo from the weather. Suitcase-like overcenter hasps secure the covers, but as with any luggage

HONDA Clarion
88.8
MEMORY

PHOTOGRAPHY: ROBIN RIGGS







using detachable tops, it's crucial to keep them locked while the bike is in motion. Otherwise you're likely to spend some time at the roadside looking for a flipped lid.

The Interstate toy that really gets you turned on, though, is the radio. It isn't some cheap hunk of automotive electronics, either. Honda commissioned Clarion to build an AM/FM stereo radio to motorcycle specifications, which means masking motorcycle ignition noise as well as making it vibration- and weather-proof.

Honda also sought to keep the radio within easy reach and to make its operation simple, thereby minimizing the amount of one-handed riding required to operate it. As a result, the radio's tuner is mounted in the fairing's lower left-side compartment, while the amp and receiver are bolted securely to the fairing's mounting plate and out of the way. The right rear saddlebag has an antenna fixture. The tuner carries a large frequency display above a bank of memory buttons for punching in four AM and four FM stations. The radio also automatically seeks signals and fine tunes itself. And when you walk away from the Interstate, you can dismount the pocket-size tuner with a twist of your ignition key (all locks on the motorcycle will operate on the same key) and take it with you.

You might expect a pair of speakers and a power-booster to be a part of the system, but they're not really necessary. The radio has been fitted with a headset that can be installed in your helmet to give you true stereo. And the headset even includes a voice-actuated intercom that will suppress the radio momentarily and let you speak with your co-pilot.

Of course, you may think Honda simply has gone crazy with accessories and thrown all the junk possible in the Interstate's direction. But it should be emphasized how well integrated this package is and how superbly it functions. Sure it's unabashed fun, but this Hondabilt is no more like a cheaply put-together toy than the last long-haul truck that passed you at 80 mph on the downside of Sherwin Grade. *—Michael Jordan*

The Option List

(prices approximate)

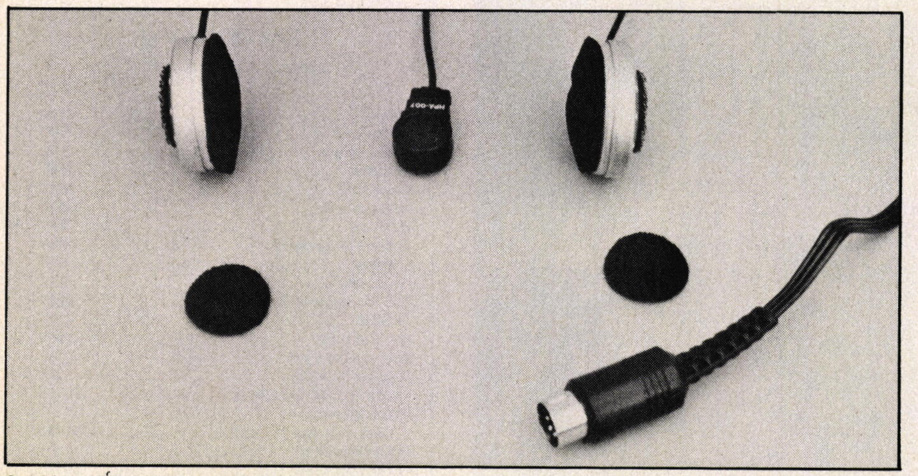
Fairing	$440
Fairing lowers	$60
Engine guards	$40
Saddlebags	$340
Travel trunk	$225
Instrument pod	$25
Voltmeter	$28
Ambient temperature	$39
Altimeter	$34
Quartz clock	$52
AM/FM stereo radio	$300
Antenna	$25
Headset (one)	$50
Twin speakers and power booster	$75
Honda GL1100 Gold Wing	$3798
Honda Interstate (less radio and gauges)	$4950
Honda Interstate (fully equipped)	$5526

their part to aid ride as well as durability in the swingarm pivot, while areas around both the steering head and the swingarm pivot have been strengthened.

Throughout the Gold Wing, the same thoughtful improvement has been carried through. Hefty tires fore and aft push the Gold Wing's GVWR 100 pounds higher. The well-padded double-bucket seat can be adjusted fore-and-aft over a 1.6-inch range, not to mention being the most comfortable seat of its type. And a high-output alternator delivers a full charge at idle to compensate for the drain of any outlandish accessories you might want to hook into the GL's fused accessory terminal, which hides beneath the fake fuel tank's flip-top hatch.

Wherever you look on the Interstate, Honda's desire for uncompromised function can be detected, like in the suspension—the most sophisticated to ever appear on a touring bike. Both front and rear units are air- *and* coil-sprung, with a balance tube connecting each fork leg to the other and each shock to the other to make equal adjustment easy. The air pressure in the shocks is even monitored by a dashboard idiot light.

Ride quality is the prime directive of this suspension, for it isolates bumps and road harshness in a way that few automobiles, much less motorcycles, are capable of. In front, the Gold Wing's fork has about the same travel as last year's no-air unit, but stanchion-tube diameter has swelled 2mm and the triple-rate coil springs are softer. Tuning air pressure within the 14-to-21-psi range Honda sug-



Cushioned headset easily fits into your helmet

Voice-actuated microphone lets you brief your co-pilot on the flight plan.

Twin intercom plugs

Plugging in only takes a second.

gests permits you to determine the progressiveness of the total spring rate. Fork action is further refined with two anti-stiction bushings like those used on the CR250/CR125 motocrossers: one at the top of the slider, the other at the bottom of the fork tube. In this way, Honda can combine a luxury ride with sufficient overall spring rate to support the fairing.

An emphasis on quality instead of quantity is also reflected in the rear suspension. Two springs inside each shock furnish the primary springing medium while air pressure allows you to maintain ride height and prevent suspension bottoming once the bike is tour-laden. The quantity of travel available is less important—in fact, the stroke of the new shocks is 6mm less than before. But an anti-stiction bushing and a four-stage FVQ feature which provides different rates of rebound damping according to the amount of rear-wheel compression help take all the bumps and thumps out of the road.

When you fully dressed an older Gold Wing, the pieces just didn't add up. The bike's low center of gravity and relatively quick steering geometry made it sensitive to the aerodynamic idiosyncrasies of a fairing or even just longitudinal imperfections in the pavement, often manifested in a less-than-polite shimmy from the front end. The engine guzzled fuel and went limp at altitude. Midrange power was only a rumor. The suspension hammered the rider when the bike was unladen, yet grew weak-kneed once it was fitted with touring gear. True enough, the engine never caused a moment's discomfort while cruising the Interstates, but almost every other portion of the bike would prove, at one time or another, to be ill-mannered, ill-suited or just plain inadequate.

That's why the Interstate's accomplishment might be measured in the transformation of an almost-anachronism into the last word in long-distance travel. Even while going in a straight line, the Interstate belongs in another dimension than last year's Gold Wing. The way the fairing works is a good example. The mirrors at either side remain perfectly clear at all speeds and they are positioned so well that only a slight side-glance away from the road will tell you everything you need to know. The wind-tunnel testing has paid off too, for while the air swirling over the fairing tickles at your waist, your shoulders and on top of your helmet, the hurricane gusts which strike you from the rear while riding behind other fairings are all but missing. Meanwhile, the suspension smothers even that mild sensation of road harshness that can wear you down over a 500-mile ride, whether you boost suspension air pressure to a maximum or let it ride with the minimum.

It's always clear that you are riding a very long and very heavy motorcycle while you're in the Gold Wing's saddle, especially because of the 20mm reduction in seat height and the stretched wheelbase, yet the Interstate seems to produce a kind of gyroscopic stability at speed. You can run the tach up to redline in fifth and still feel the Gold Wing's internal stabilizer keeping everything straight.

The most noticeable distinction between the Gold Wing and other touring rigs lies in the way it negotiates bends at high speeds. A fairing on top of the front wheel and fully laden bags above and behind the rear can play havoc with a bike's equilibrium—as the nasty wobbles of the Dresser Gold Wing tested by *CG* this past summer demonstrated. Yet in the same situations, the Interstate doesn't start throwing its weight around in 12 different directions. Oh yes, it will begin to wobble at about 80 mph, but you'll have to lean it way over before that happens. In the slow corners, the front suspension doesn't bottom out under braking and the rear end doesn't jack up and down as much when you accelerate and decelerate (due in large part to the longer swingarm). It's still easy to grind the centerstand and footpegs if you desire, but no longer must you summon death-defying courage to do so.

That alone is an indication of how much things have changed for GL Hondas. At one time it was necessary to make excuses for Gold Wing Dressers, even though they were ethereally smooth and you couldn't make a butter dish more reliable. But whenever the conversation turned to the things an ordinary motorcycle should be capable of, Gold Wing owners had to make excuses. As a result, GL touring rigs became "devices" excluded from all normal praises and criticisms because of some congenital birth defect.

The Interstate changes all that. It's so good at what it does that it no longer needs to be excused from being a motorcycle. Because in nearly every way but hard-and-fast sport cornering, the Interstate is better or at least on par with most non-touring motorcycles.

So forget all of those sarcastic comparisons of full-dress GLs with station wagons and motorhomes. Deep-six your old-fashioned notions about tour-pak GLs being overweight, underpowered, ultra-clumsy hippobikes. Because the Interstate just doesn't qualify. It may, just like its 999cc predecessors, be a touring "thing," but for a change it's a motorcycle, too. •

Ride Review

• In evaluating motorcycles, I've always found it's best to avoid superlatives; after all, today's world-beater is tomorrow's old news. But this Honda Jumbo Wing has burst my blister-pack of sealed-forever praise. In short, I figure that if you're a touring guy or likely to be one, if you don't buy this motorcycle you're a fool.

The reasons for that view are listed elsewhere, so I won't simply add to the compilations of experiences here; rather, I'll restate the position another way. The Compleat Tourer concept has never been so fully, so faithfully, even ruthlessly, executed as in the new GL-1100 Interstate. It does everything, and does it well to boot. I can't tell you about its reliability over a run from Manitoba to Maine, but I can tell you that nobody has ever designed a motorcycle or built it so well to do it. This bike is *the* Tour King. Period, end of report.

—Steve Thompson

• I'm not to be trusted when I'm anywhere near this motorcycle. Send me to the store on it for a quart of milk, for instance, and I'm liable to come back two weeks from Tuesday with several thousand additional miles on the odometer—and, naturally, without the milk. Not that I'm irresponsible, forgetful or get lost easily; it's just that every time I climb onto the bewitching Interstate, I don't want to climb off of it. I want to ride and ride until I either have to stop riding or start alimony payments.

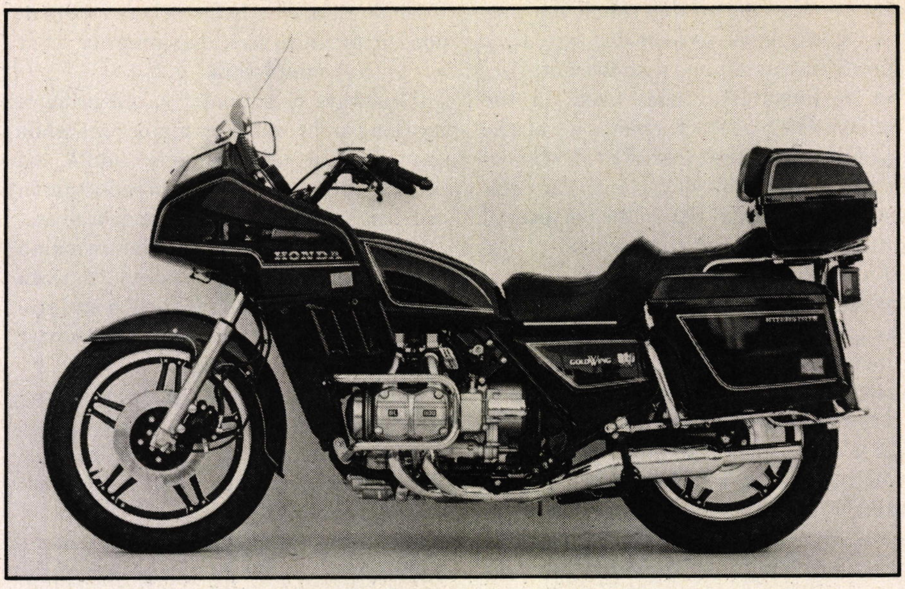
Maybe it's the name "Interstate" that urges me to get onto route I-something-or-other and chase the horizon. Or since I'm a compulsive gadgeteer anyway, possibly I'm spellbound by the bike's fascinating array of electrical and hydraulic playtoys. Whatever it is the Interstate is selling, though, I seem to be buying. In wholesale carload lots. *—Paul Dean*

• Look, I hate to sound like Little Sir Echo, but what you've read so far about the Interstate is all true. Honda has managed to pack a staggering array of gadgets, gauges and outright toys into one integrated package. No great trick so far, except that the GL-1100 is not just a fancy housing for those trinkets. In stretching the fooling of Father Physics to the limit, Honda produced in this Gold Wing what it failed to make in last year's bike—a legitimate motorcycle, not a touring platform with wheels.

Something inside you might rebel at the thought of a motorcycle with (dare I say it) stereo, and the sight of all those instruments might offend your aesthetics. Okay, that's your business. But what is underneath the glitter—and in this case the glitter *is* gold—is a hell of a nice touring machine. Better yet, a hell of a nice motorcycle. *—Larry Works*

Continued

Honda GL-1100



SPECIFICATIONS:

IMPORTER: American Honda Motor Company
100 W. Alondra Boulevard
Gardena, California 90247

CATEGORY: street

SUGGESTED RETAIL PRICE: $4950 ($5578 as tested)

ENGINE

Type	water-cooled four-stroke horizontally opposed four
Valve arrangement	single overhead camshafts
Bore and stroke	75.0mm x 61.4mm
Displacement	1085.0cc
Compression ratio	9.2:1
Carburetion	four 30mm Keihin constant-velocity, one accelerator pump
Air filter	disposable paper element
Lubrication	wet sump
Starting system	electric only
Ignition	transistorized breakerless (with vacuum advance)
Charging system	12-volt; alternator, voltage regulator, rectifier

DRIVETRAIN

Primary drive	Hy-vo chain
Primary drive ratio	1.708:1
Clutch	wet, multi-plate
Transmission-to-driveshaft drive	straight-cut gears
Transmission-to-driveshaft ratio	0.973:1
Driveshaft-to-rear-wheel-drive	spiral bevel gears
Driveshaft-to-rear-wheel-drive ratio	3.091:1

Gear	Internal gear ratio	Overall gear ratio	MPH per 1000 RPM
I	2.50	12.84	5.8
II	1.67	8.77	8.8
III	1.29	6.61	11.4
IV	1.07	5.47	13.7
V	0.91	4.67	16.1

SUSPENSION/WHEEL TRAVEL, IN.

Front	air-spring, 39mm stanchion tube diameter / 5.9 in. (150mm)
Rear	air-spring / 3.8 in. (97mm)

BRAKES

Front	dual single-action hydraulic calipers, 10.8-in. (275mm) disc
Rear	double-action hydraulic caliper, 11.8-in. (300mm) disc

TIRES

Front	110/90-19 62H Dunlop Gold Seal F11
Rear	130/90-17 68H Dunlop Gold Seal K127

DIMENSIONS AND CAPACITIES

Weight	718 lbs. (325.7kg)
Weight distribution	44.4% front, 55.6% rear
Gross vehicle weight rating	1105 lbs. (501.2kg)
Wheelbase	63.5 in. (161.1cm)
Seat height	30.8 in. (782mm)
Handlebar width	31.3 in. (795mm)
Footpeg height	11.5 in. (292mm)
Ground clearance	6.3 in. (160mm), at exhaust pipe seam
Steering head angle	29.6 degrees from vertical
Front wheel trail	5.3 in. (134mm)
Frame	tubular mild steel, double front downtubes
Oil capacity	4.2 qt. (4.0*l*)
Fuel tank	steel, 5.3 gal. (20*l*), including 1.3 gal. (4.8*l*) reserve
Instrumentation	speedometer, odometer, tripmeter resettable to zero, tachometer, fuel gauge, water temperature gauge, ambient temperature gauge, altimeter, quartz clock, voltmeter

PERFORMANCE

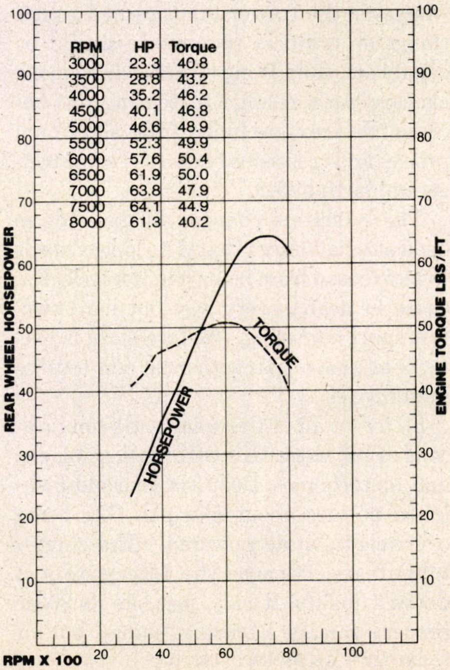
Fuel consumption	33.0 to 44.5 mpg (14.0 to 18.9km/*l*)
Range, maximum	175 to 236 miles (280 to 378km)
Range, reserve only	43 to 58 miles (67 to 90km)
Speedometer error, 30 mph indicated	30 mph actual
Speedometer error, 60 mph indicated	60 mph actual
Best ¼-mile acceleration	13.40 sec., 96 mph (156 kph)
Top speed (calculated)	121 mph (195 kph)
Stopping distance from 30 mph	33 ft. (10.1m)
Stopping distance from 60 mph	146 ft. (44.5m)

All weights and measurements are taken with machine unladen and fuel tank empty.

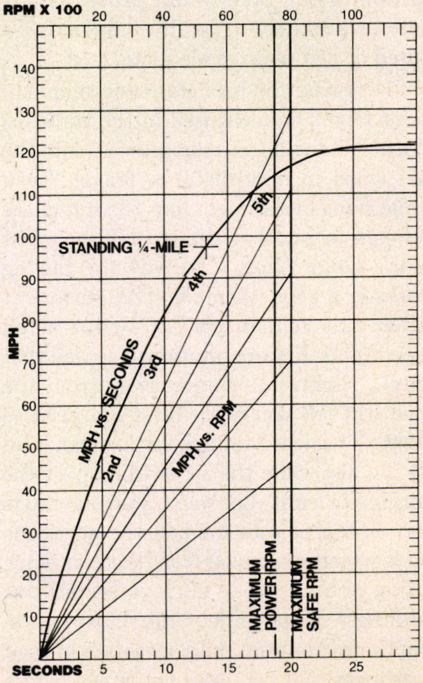
COMPARATIVE TEST DATA:

Make	Quarter-Mile, sec/mph	Top Speed, mph	Weight, lbs	Stopping Distance From 60mph, ft.
Honda GL-1100 Interstate	13.40/96.9	121	718	146
Honda GL-1000 (Dressed)	14.40/90.4	127	704	141
Yamaha XS1100F (Dressed)	13.13/105.0	134	649	NA
BMW R100T (Dressed)	13.81/92.9	119	521	142
Kawasaki KZ1300	11.79/115.7	140	664	133
Kawasaki KZ1000 ST	12.23/104.0	132	574	130

PERFORMANCE:



RPM	HP	Torque
3000	23.3	40.8
3500	28.8	43.2
4000	35.2	46.2
4500	40.1	46.8
5000	46.6	48.9
5500	52.3	49.9
6000	57.6	50.4
6500	61.9	50.0
7000	63.8	47.9
7500	64.1	44.9
8000	61.3	40.2



TP
TEAM PERFORMANCE™

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SUPERBIKE TUNING MANUAL

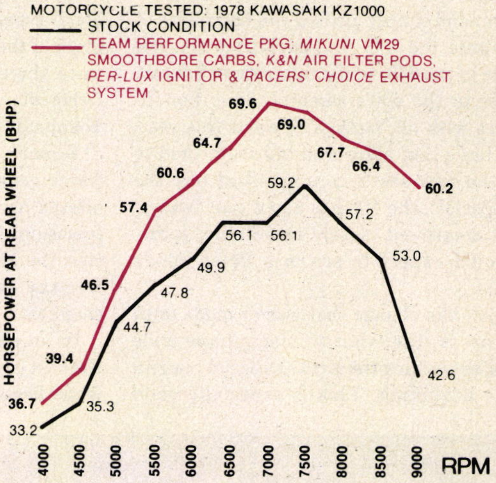
WHAT IS IT? *and what does it mean?*

The TEAM PERFORMANCE SUPERBIKE TUNING MANUAL is a dramatic new concept in evaluating high performance products by documenting and focusing on the mutual relationship and compatibility of one product to another by the use of expert tuning and dyno testing. Our objective is to promote and substantiate the performance capability of "TP" products both singly and together.

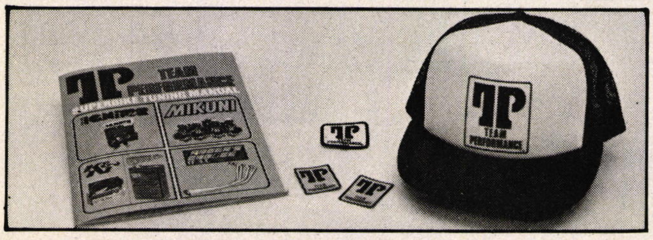
The Team Performance Advisory Staff will monitor and chart exactly how a particular superbike performs on the dyno: horsepower and torque curves, engine temperatures, air density and humidity, etc. Then Team Performance will demonstrate conclusively how each product works independently of the others and in unison.

Recommendations on spark plugs and heat ranges, Mikuni tuning and jetting information, tire selection and wear, drive chain maintenance, air filtration flowmetrics, combustion characteristics — fuels, additives. In other words, a step-by-step tuning procedure to set-up a superbike to the exact performance and maintenance standards that the enthusiast and his much worn pocketbook can handle.

The "TP SUPERBIKE TUNING MANUAL" will contain tests on the most popular superbikes, however, the almanac of knowledge contained in the manual will serve as a universal guideline for the enthusiast irrespective of what motorcycle or whose aftermarket products he may choose.



"SPECIAL INTRODUCTORY OFFER"



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MINITEST:

Yamaha XS400SG

Maybe the littlest 650 you'll ever ride.

• Never give the Yamaha XS400SG just a quick glance. You might mistake it for a 650. And wouldn't you feel foolish around your riding buddies talking about a *little* bike that way?

It wasn't by chance this twin so closely resembles a big bike such as the XS650. As soon as Special magic began disappearing Yamaha street bikes off dealer showroom floors in 1977, the 400 was given a wave of the wand. And out of the magician's hat came a 400 twin that looked much like the XS650SE, which, incidentally, was the first-ever Yamaha Special.

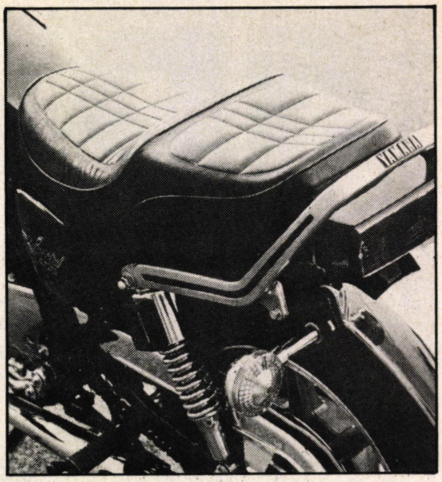
The styling trick for the 400 was straightforward: Yamaha simply grafted the basic lines of the 650 onto the 400. And each time changes are made to the 650, similar alterations are carried over to the 400's assembly line. For instance, as with all Yamaha Specials this year, the 400 has a cast-alloy grab rail sculptured to match the new seat's contour. And like the larger Specials, the 400 has a new rear fender/taillight treatment closely resembling something you'd expect to see in a Peter Fonda movie.

One 650-like change that wasn't made until this year is the shorty megaphone-style mufflers, something the XS650 Special has had from its beginning. This is especially good news, since the XS400SG's smaller pipes not only eliminate a lot of chrome clutter caused by the old full-length pipes, they also give the 180-degree twin a throaty exhaust note more like a bigger bike's.

Custom connoisseurs will appreciate the new 16-inch rear wheel, too, which replaces the 18-incher that seemed to keep the XS400 in puberty as far as styling is concerned. It's the same basic Yamaha seven-spoke design, but it doesn't have the heavy hydraulic disc brake. In its place is a mechanically operated drum that offers plenty of braking power and also helps reduce unsprung weight because it is lighter. You'll especially appreciate the drum brake in place of the disc when changing the rear wheel, since there are less spacers to contend with. Drive-wheel traction is provided by a 120/90-16 Yokohama tire.

Yamaha didn't change the suspension and frame geometry, since the XS400 has always offered a stable ride and steered with nimble precision. Unlike some under-500cc motorcycles, the XS400SG doesn't hop and buck over freeway expansion cracks, but glides across them with controlled smoothness.

In an effort to provide additional comfort, the seat padding has been fluffed up. To do this while keeping seat height at about 30 inches,



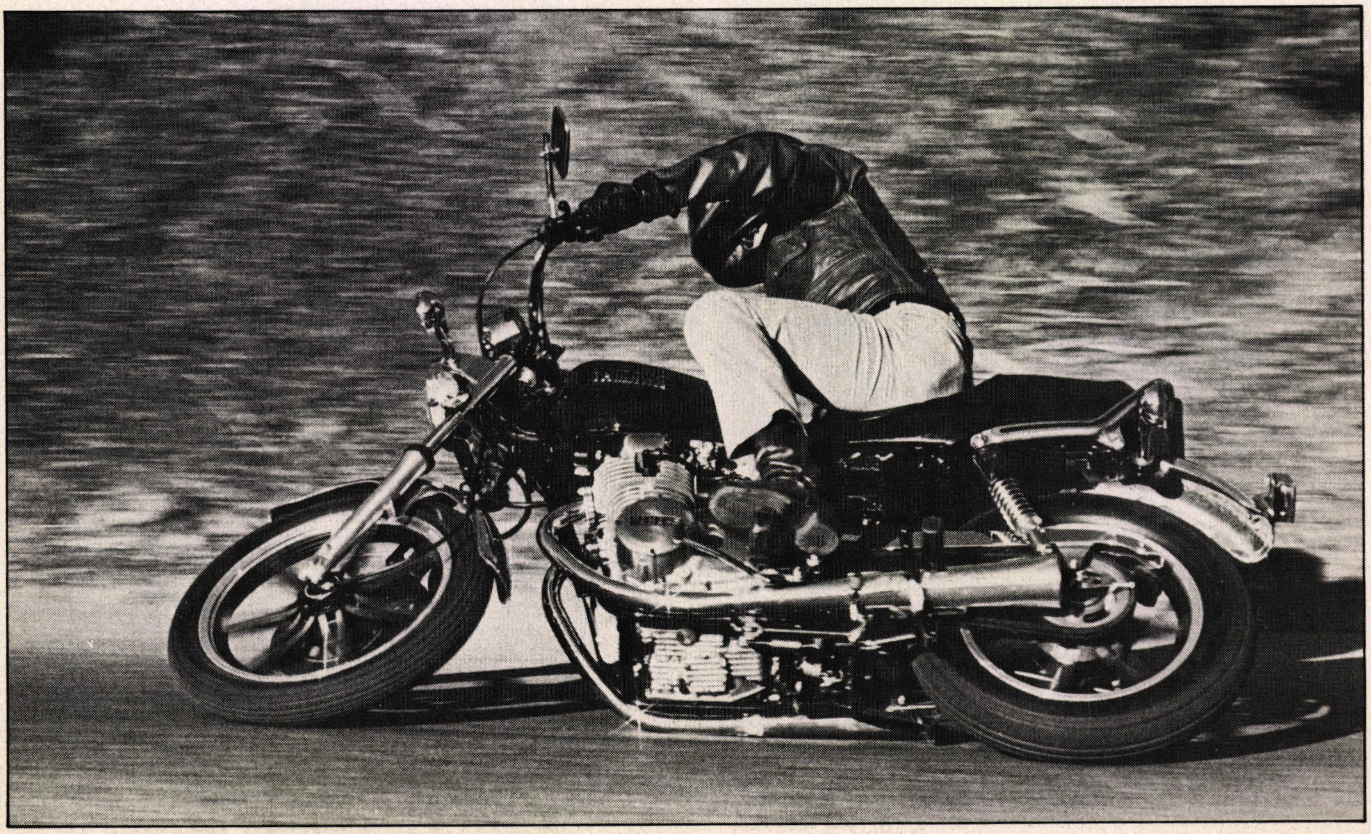
Softer seat straddled by grab rail

More padding, but not more comfort.

Yamaha XS400SG

Importer: Yamaha Motor Company, U.S.A.
6555 Katella Avenue
Cypress, California 90630

Category:	street
Suggested retail price:	$1749
Engine type	four-stroke vertical twin
Valve arrangement	single overhead camshaft
Bore and stroke	69.0mm x 52.4mm
Displacement	391.8cc
Carburetion	two 34mm Mikuni constant-velocity
Gearbox	6-speed
Front fork / wheel travel	33mm stanchion tube diameter 5.5 in. (140mm)
Rear shocks / wheel travel	5-way adjustable preload 3.8 in. (95mm)
Wheelbase	55.4 to 56.7 in. (140.7 to 149.0cm)
Seat height	30.5 in. (785mm)
Weight	374 lbs. (170kg)
Fuel consumption	49 to 55 mpg (20.8 to 23.4 km/l)



PHOTOGRAPHY: LARRY GATZ

the seat base had to be lowered. So the hinged seat was eliminated and a new plastic-mold seat base was bolted directly to the frame. The 400SG's seat has more padding than last year's tuck-and-rolled park bench, yet it is only about half an inch higher.

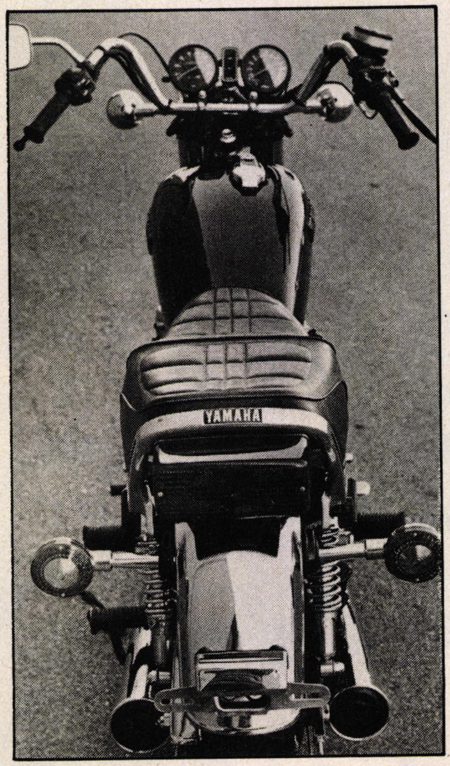
Ironically, though, the seat is not as comfortable. Sure, it's softer, but it doesn't give adequate leg support. So the rider's weight is supported only by his buttocks, and after a short time in the saddle, numbness sets in.

That is the only discomfort caused by the new seating position. The pullback handlebars and folding footpegs are situated so you sit in a very relaxed position, similar to what you'd expect while stretched out in your favorite easy-chair.

You can expect about the same zippy performance from the 400SG as with the 400F since, according to Yamaha, the engine and drivetrain are the same. Which is to say that the 400SG should do about a 14.5-second quarter-mile, same as our 400F. Around-town acceleration is nothing to snicker at either. This black beauty will pull the holeshot on just about any automobile, thanks to ample torque and a six-speed transmission that shifts smoothly. Throughout, fuel consumption hovers in the low-50-mpg neighborhood.

Pegging the speedometer needle is easy, too, since the 400SG has the mandatory 85-mph race. Also new is the single trapezoidal mirror and a stripeless paint scheme.

The sum total is a motorcycle that could easily keep company with bikes almost twice its size. But at a price that won't saturate your savings account. And at a time when $3000 barely gets you a 750, that's pretty good performance for you. *—Dain Gingerelli*



Tip-to-tail XS650-like lines

Update styling for a special 400.

New From Martek

The Best Ignition Yet

You asked for it and Martek has delivered it. The leader of motorcycle electronic ignitions has developed a **New** system that is the most reliable high performance ignition on the road today. The **440Z electronic ignition** and super high output **Blue Goose coils** will light up your bike and blast the ho-hums out of your motorcycling. This system doesn't compromise on the street or on the track. Simply put, the 440Z ignition and Blue Goose coils are the **BEST.**

440Z: This revolutionary electronic ignition leaps beyond any other system. Its dependability and high performance are based on the toughest solid state electronic technology available. Features include • easy installation • rugged and precise optical timing • special circuits to guarantee quick starting every time • 3 year factory guarantee. Available for all point-equipped, air-cooled Honda, Kawasaki and Suzuki fours. Suggested retail: $159.95.

Blue Goose coils: These dual lead coils for high performance bikes are so hot they'll give your riding a real jolt. Features • considerable more spark energy and voltage than either stock or cheaper replacement coils • easy installation in original coil-mounting position • removable plug wires (included with coils). Suggested retail: $98.95 2-coil set; $50.49 single coil. Martek has eliminated all compromises — now **you** take advantage of it — **for more power and a better running motorcycle!**

Martek electronic ignitions used by Terry Vance and other competition riders. Models available for most popular motorcycles. Send 50¢ for decals & 1980 catalog.

MARTEK
Products, Inc.

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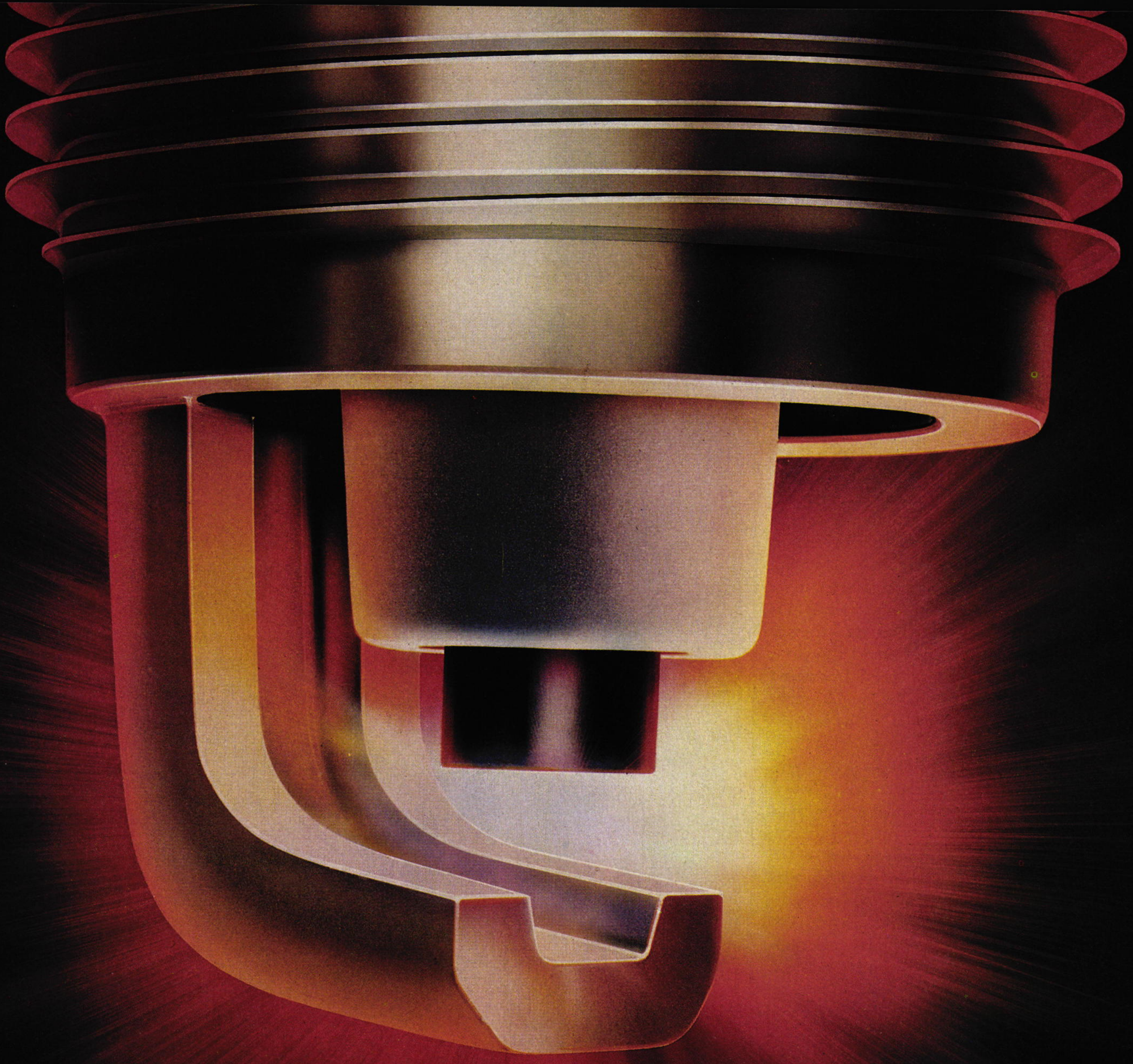
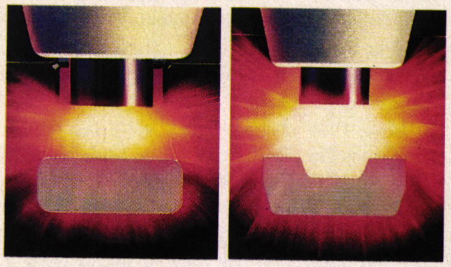
714/751-7901


HOT "U"
EXPLODES THE MYTH
THAT ALL PLUGS ARE
CREATED EQUAL.

THE DIFFERENCE STARTS WITH THE HOT "U."



CONVENTIONAL PLUG

HOT "U"

It's a difference you can see. A difference you can feel. A spark of genius we call the Hot "U." It's a U-shaped groove machined into the ground electrode. A small groove that's the first big contribution to spark plug technology in years.

The Hot "U" spark develops a larger, fuller flashfront. A bigger, hotter ball of fire for complete combustion. The kind of fire power that delivers quick starts and top performance.

But our patented U-groove is just the tip of the Hot "U" plug design difference.

THEN THE GAP WIDENS.

Insulator. Highly purified alumina powder for added strength.

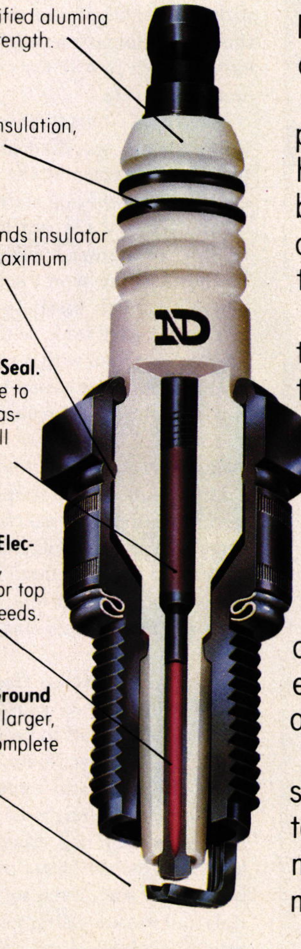
5-Rib Design. More insulation, prevents flashover.

Electric Heat Seal. Bonds insulator to steel housing for maximum gas tightness.

Unique Copper-Glass Seal. Fuses center electrode to upper stem to form gas-tight seal. Assures full voltage at spark gap.

Copper-Cored Center Electrode. Creates a wide, efficient heat range for top performance at all speeds.

Patented U-Grooved Ground Electrode. Develops a larger, fuller flashfront for complete combustion.



Inside, the Hot "U" design difference gets even bigger.

Our insulator has more alumina powder for added strength. It'll hold up better even under a dirt bike's vibrations. And our five-rib design provides more insulation to prevent flashover.

Our copper-cored center electrode gives you the kind of thermal and electrical conductivity you need—where you need it the most—to create a wide, efficient heat range. Which gives you top performance at every speed from lug to let 'er rip. To insure full voltage at the gap, we fuse the center electrode to the upper stem with a unique copper-glass seal.

And we use an electric heat seal to bond the Hot "U" insulator to its steel housing to give you maximum gas tightness and a more stable heat range.

The incredible Hot "U" from Nippondenso.

It's unique. It's patented. It makes a sophisticated difference in today's sophisticated engines, exploding the myth that all plugs are created equal.

On-street or off-road, there's a Hot "U" plug that's right for your bike.

Stop by your nearest bike shop today and ask for the genuine Hot "U" from Nippondenso. And, now that you know the difference, don't buy "just as good."

For the name and location of your nearest ND plug dealer, or for more information, just write: Nippondenso of LA, Inc., 857 East 230th St., Carson, CA 90745.

ND

NOT ALL PLUGS
ARE CREATED EQUAL
HOT "U"
SO UNIQUE, IT'S PATENTED.

Also available in Gold Palladium version.

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PRODUCT EVALUATION:

The Bull Tank Bag

The natural one; no preservatives added.

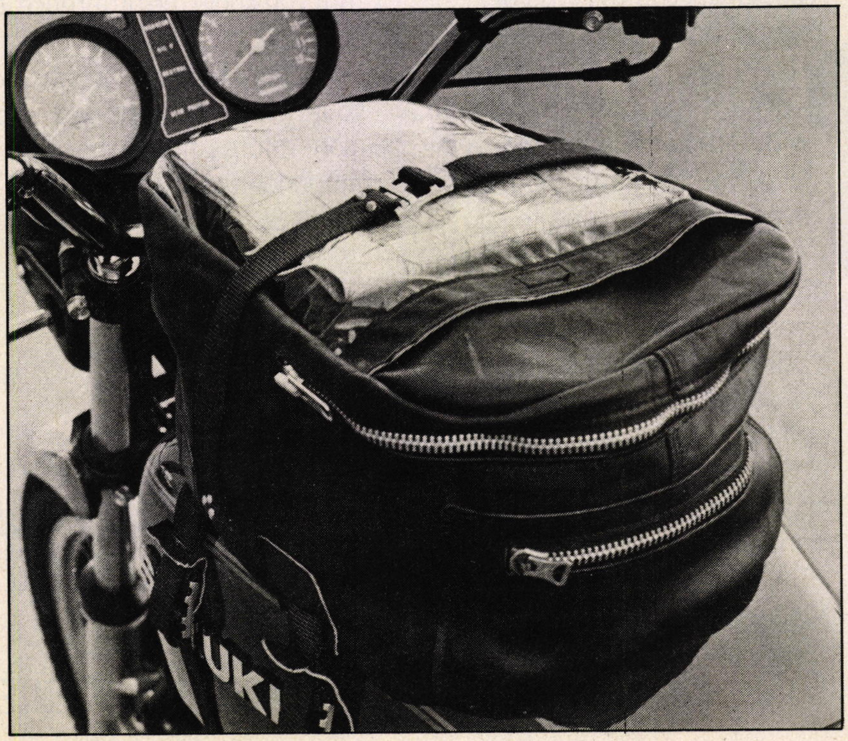
• Sure, I know tank bags are supposed to be strictly functional items, a handy place to store a down vest, a few rags, chain lube, a flat tire kit and your map supply while you're on the move. But tank bags also make me feel good. I guess I'm a sucker for the way a tank bag lends a motorcycle an added dimension of seriousness. A combination tool bag and kangaroo's pouch strapped to my bike's fuel tank tells the world I'm not afraid to conquer prodigious distances with only a few bits of luggage and a wallet full of credit cards.

This tank bag from the Second Story Leather Shop is called "The Bull," and it makes me feel especially good. Like a BMW, this is strictly a high-quality item. David Weinberg, the gent who runs Second Story, clearly appreciates the aesthetic impact of a tank bag as well as its functional quotient. It's been his goal from the beginning, in fact, ever since a few friends convinced him to give up the shoe repair business and begin the construction of fine leather goods for motorcycles.

The Bull tank bag fosters pride in ownership because it's made from high-quality materials. That's real four-ounce oiled cowhide you see here folks, not sleazy vinyl or effete cordura nylon. And there's more. To keep the finish of your fuel tank intact, the underside of the Bull is covered with honest-to-goodness sheepskin. In Weinberg's experience, just about any synthetic pad will mar your fuel tank sooner or later. Sheepskin provides the most effective pad money can buy, and it absorbs water as well, keeping the leather high and dry. Still, Weinberg admits that no leather can be perfectly waterproof, so he supplies a flexible clear-plastic cover with his tank bag that can be slipped in place whenever the rainclouds threaten. He claims the cover will resist yellowing from the sun and won't crack from the cold.

Look out for the woolly Bull belly

A change of pace in tank bag design.



More than just high-class materials distinguish The Bull from other tank bags, though. It features the best workmanship we've seen on a tank bag around here since the Eclipse model, which is the standard for the industry. The bag itself is larger than the Eclipse although it doesn't have the multitude of small compartments that make the Eclipse so handy. A Velcro-sealed map pocket lets you read a map while on the go, just like with other good tank bags, and a strap across the top permits you to fasten down extra gear. There's a small compartment sealed by a metal zipper on the aft side of The Bull meant for change and the odd pen. The main compartment is sealed by another metal zipper that runs only partway around the aft portion of the bag, restricting access. I could probably live with the jumble of gear sloshing around in the main compartment if the access were large enough to sort through the contents more effectively.

The Bull fastens to your bike with three nylon straps specified at a pull of 6000 pounds. One strap at the head of the bag encircles the steering stem. The other two on the body of the bag loop beneath the tank. The fastening buckles rest on a pad of leather so they won't scratch the paint. There's enough strap to encompass the girth of a BMW tank, so there's plenty left over on any bike with a smaller fuel cell. I simply looped the excess back into the bag through the same wide slits where the straps exit. The arrangement works well, although you could trim the straps to fit.

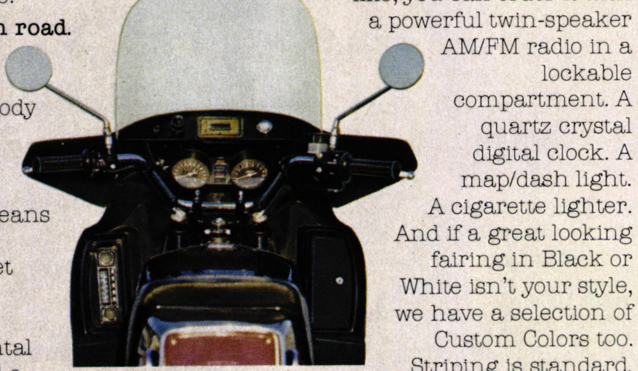
Once in place, the simple mounting system keeps the bag resolutely in place. The sheepskin probably plays a role in the bag's reluctance to slip around much. I was dubious of gas-cap access, but I soon discovered that by loosening the strap at the steering stem the bag could be pulled aside far enough to expose the fuel filler. The hatch over the fuel cap of Suzuki GS400 and GS550 proved to be a problem, but I could get at other Suzuki caps as well as those of Hondas and Yamahas.

I suppose $75 might be too much to pay for such a small bag, especially when nylon tank bags deliver better performance in almost every way. Even so, high-class materials and workmanship make me feel like a rider of distinction and good taste. I reckon The Bull is cheap at the price. You can become a man of distinction and taste by contacting the Second Story Leather Shop, 30 North Maple Street, Florence Massachusetts 01060. *—Michael Jordan*

We believe the Clipper is the finest fairing you can buy. Here's why.

The world is full of fairings. But, if all you want is just another windjamming lookalike, you might as well stop reading now. The Bates Clipper has styling that stops 'em in their tracks. And a shape proven in the wind tunnel to give superior air penetration and low drag coefficients. That's important for good gas mileage.

The feel of the open road. The articulated design of the Clipper (the main body is frame-mounted; the windshield section turns with the handle bars) means the fairing can be closer to you. You get better visibility and wind protection without a large frontal area. Riding behind a Clipper is a unique experience: there's a gentle breeze, rather than buffeting. Our windshield is adjustable so you can make it just right for you. And on the Clipper, the removable leg shields are standard. So you get the kind of wind protection that you buy a fairing for.



Room to Stow: Not only is there ample lockable side storage, there's additional lockable storage in the top-loading front compartment. Only in the Clipper.

Creature Comforts. Some say the Clipper comes close to being a two-wheeled sports car. If you like, you can order it with a powerful twin-speaker AM/FM radio in a lockable compartment. A quartz crystal digital clock. A map/dash light. A cigarette lighter. And if a great looking fairing in Black or White isn't your style, we have a selection of Custom Colors too. Striping is standard.

Overkill. We're probably guilty. We built our Clipper solid. Everywhere. Fiberglass body, rugged mounts and brackets, 5-pin tumbler locks, Plexiglas windshield, sound-absorbing flocking and not one but two sealed-beam headlamps to light the road. All in all, the Clipper is well thought-out, well engineered, well put-together. And competitively priced with comparably equipped fairings. In fact, Rider magazine said: "The Bates Clipper could well spawn a whole new generation of fairings in the years to come." We couldn't have said it better ourselves.

For the 1980 catalog and complete ordering information, send $3.00 to:

BATES INDUSTRIES, INC.

BATES®

the "quality people"

Box 240- GC, Long Beach, CA 90801

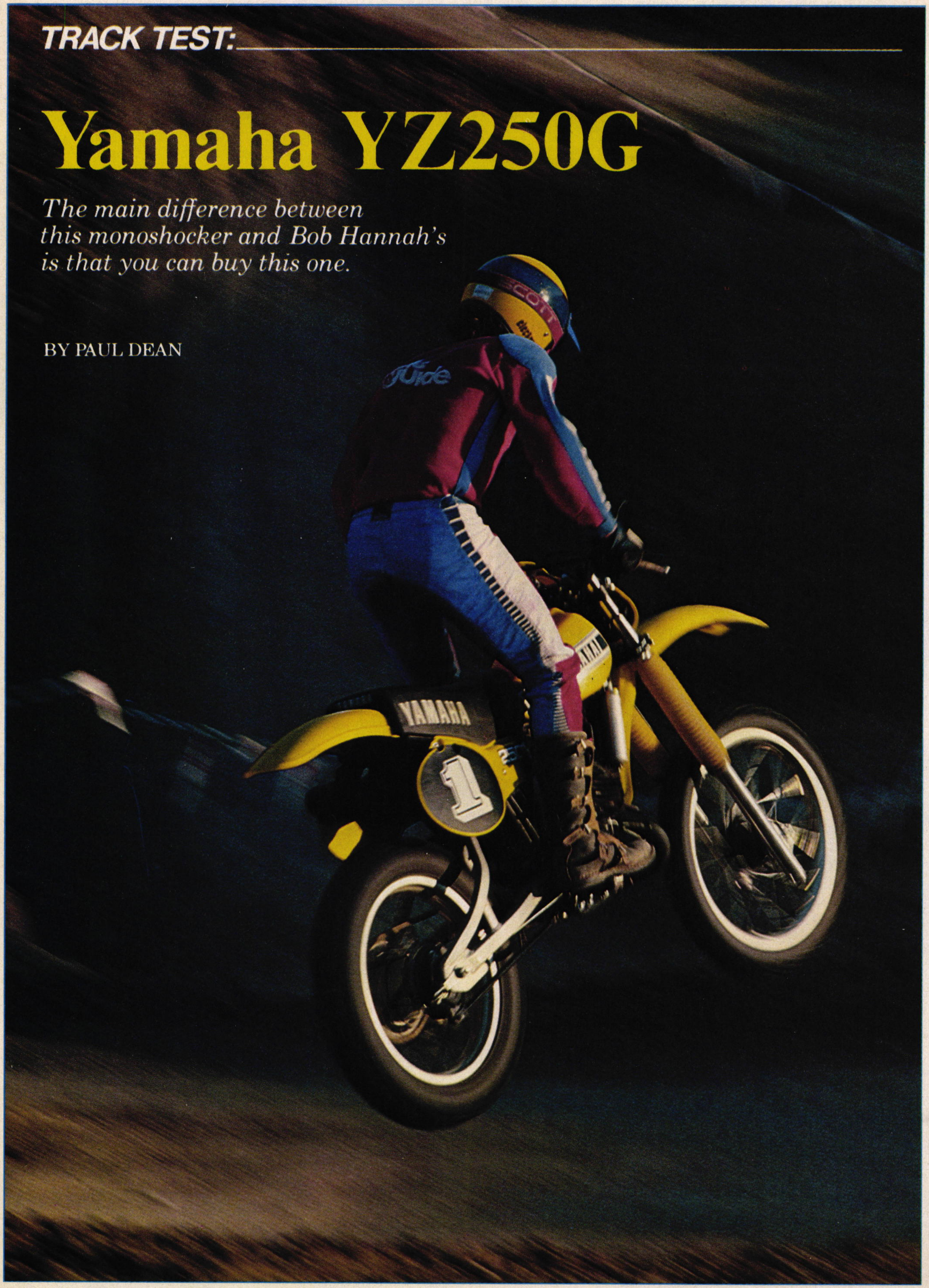
Shown with Bates new Engine Guard and Fiberglass Saddlebags and Totebox combination.

TRACK TEST:

Yamaha YZ250G

The main difference between this monoshocker and Bob Hannah's is that you can buy this one.

BY PAUL DEAN



PHOTOGRAPHY: GEORGE WEGNER

If you can find a motocross rider in all of America who wouldn't like to have Bob Hannah's factory 250 for his very own, check his pulse; he may have passed away unnoticed. Everyone knows, of course, that it is Hannah's talent, not his motorcycle, that has made him all but unbeatable. Still, it's quite natural for average-guy motocrossers to wonder how much faster they'd be able to ride on The Hurricane's OW40 works racer.

Unfortunately, we all know that unless the claiming rule is reinstated, no one out there is ever going to own a Yamaha works bike or even get a *ride* on one. But you may not know that you can come close, that it's now possible for anyone with $1898 at his disposal to own a machine that's not unlike those that Hannah rode to more victories than his competitors would care to remember. That motorcycle is the one you see here, Yamaha's new YZ250G, and although it's not an *exact* copy of the works model, it is—as much as the compromises of mass-production allow—a Hannahbike replica.

That should spell new success for Yamaha's 250cc YZ series, not just on the track but in the showroom, as well. Because despite the Hannah/Yamaha monopoly of 250-class racing in recent years, YZ250 sales have, not to put it too indelicately, taken a dump. And the biggest reason has been the motocrossing public's growing awareness of the vast dissimilarities between their hero's bike and the ones for sale down at the Yamaha shop.

What's more, YZ250s have always seemed burdened with one glaring flaw or another that detracted from those otherwise fine motorcycles. If there wasn't something wonky in the steering, there'd be problems with the suspension or glitches in the powerband. And like all previous monoshock Yamahas, every YZ250 came factory-equipped with a high center of gravity and the resultant feel of excess weight caused by having such a heavy shock stuffed way up under the gas tank.

That's all ancient history now, though. Thanks to the same technology that brought Yamaha three consecutive Supercross championships and two straight 250 National titles, the YZ250G has none of those aforementioned difficulties. It is, in fact, the most competitive YZ250 ever built and, quite honestly, the best 250 motocrosser we've ever ridden.

All you have to do is *look* at the bike to begin understanding why. The perennial high center of gravity, for example, has been lowered to a more conventional location through the use of a new frame and a remote-reservoir monoshock, both of which were developed on the works bikes. Yamaha makes the expected it's-lighter-and-stronger claims about the new all-tubular, single-downtube chromoly frame (which supersedes the pressed-steel-and-tubular double-downtube structure used since 1977), but the most important thing it does is to allow the use of a very short and light OW-type rear shock. The frame's top backbone tube angles sharply downward so that the shock's top mount can sit on top of it, about halfway between the front of the seat and the steering head. This is in contrast to the previous arrangement, in which a long shock extended all the way to the steering head by running *inside* a hollow backbone.

With an aluminum shock that's considerably shorter and lighter (with most of the weight savings up high, just behind the steering head), the G-model YZ feels 10 to 15 pounds lighter than last year's F-model, even though it's really just a scant three pounds lighter (217 pounds vs. 220). But you can slam the G-bike into a berm hard enough to bottom the suspension and still notice none of the highsiding tendencies that bothered previous YZs. And this short-shocker responds immediately to sudden changes in lean angle as willingly and nimbly as some 125s.

Cutting so much length off the shock forced the DeCarbon free piston and high-pressure nitrogen that formerly resided in the main body to be relocated in the aluminum reservoir clamped to the front downtube. But believe it or not, the new shock has 16mm *more* piston travel than the old one, and it allows the G's rear wheel to swing in a 1.2-inch longer arc (11.6 inches vs. 10.4).

Also new is an unusual shock spring that has a truly progressive rate, a feat accomplished in two ways: The diameter of the spring wire is smaller during the last few winds at both ends and the pitch between coils is lesser at the extreme ends of the spring. The hoped-for result is to have a super-soft initial rate to soak up the little chops and ripples; a hard final rate to resist harsh bottoming on the biggies; and an ever-stiffening rate everywhere in between to absorb the majority of motocross bumps and thumps according to their severity.

Actual on-track use seems to verify Yamaha's wisdom in choosing the progressive spring, for the rear suspension works fabulously. The rear wheel hooks up and follows the contours of the ground much better than on any other YZ ever made, and we rated the rear suspension in general right up there at the top with Ohlins-shocked Huskys and the Kayaba-equipped late-model RM Suzukis. Better yet, turning the shock's damping-adjustment ring on the G-model (the shock is mounted "upside-down" this year to reduce unsprung weight and locate the adjuster where it's more easily reached) actually has a noticeable effect. Unlike last year's monoshocker, the G-model's shock can be dialed in for just about any amount of damping from buckboard-firm to Buick-soft, with the ideal obviously coming somewhere in between (although 95 percent of the damping variation occurs within the first 18 of the adjuster's 25 positions). We generally kept ours adjusted somewhere between the eight- and tenth-firmest positions, with the spring preload set about in the middle of its 15mm adjustment range.

There are fewer external adjustments on the YZ's front fork, but that doesn't keep it from performing on par with the sophisticated rear suspension. The 38mm tubes help minimize side-to-side flex during the early stages of the 11.2-inch travel, and a switch to a thinner recommended oil (10-weight vs. 15-weight) than used in '79 provides excellent damping characteristics. Oddly enough, though, the combination of a 21-percent stiffer rate on the coil springs and a 23cc-greater oil level makes it unnecessary to pressurize the air/spring fork at all. The factory recommends that the zero-psi static setting be maintained unless some unusually brutal riding conditions cause harsh or frequent bottoming.

Frankly, we found no reason to add air. Only the hardest front-wheel-first landings from the highest jumps could produce a hint of bottoming, and the behavior of the fork on cobby ground was just short of perfection. A Husky or Suzuki front fork might be able to absorb motocross punishment better than the YZ250G's fork, but only by the slimmest of margins.

Together, those two fine suspension systems combine with the lowered center of gravity to help make the 250G one of the easiest-to-ride, most-forgiving motocrossers you're likely to not fall off of. There's a certain confidence-inspiring stability engineered into the YZ's slightly slow steering geometry and a reasonable turnability afforded by its average-length wheelbase. Granted, the thing doesn't whip around tight-radius corners like a YZ50, and in really sharp turns it feels longer than it is.

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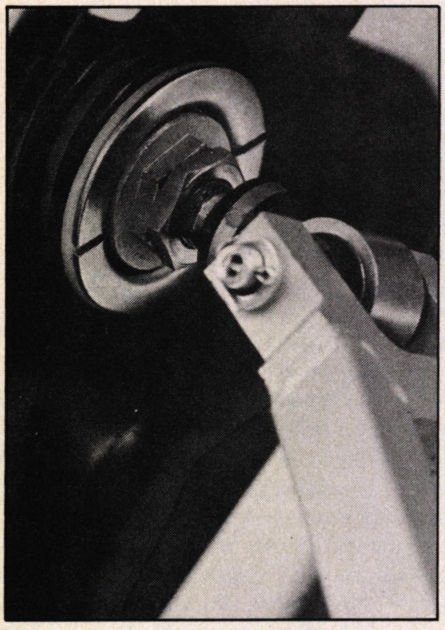
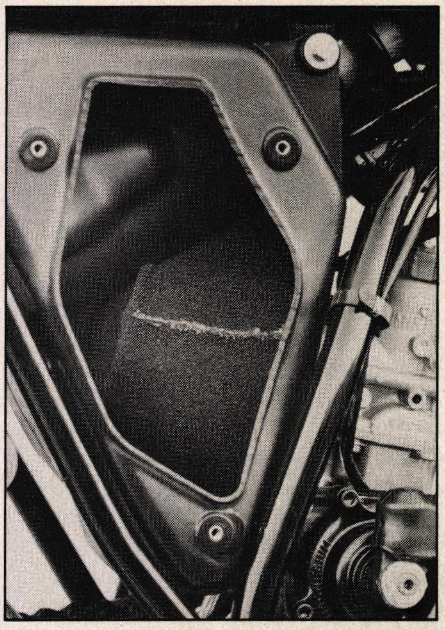


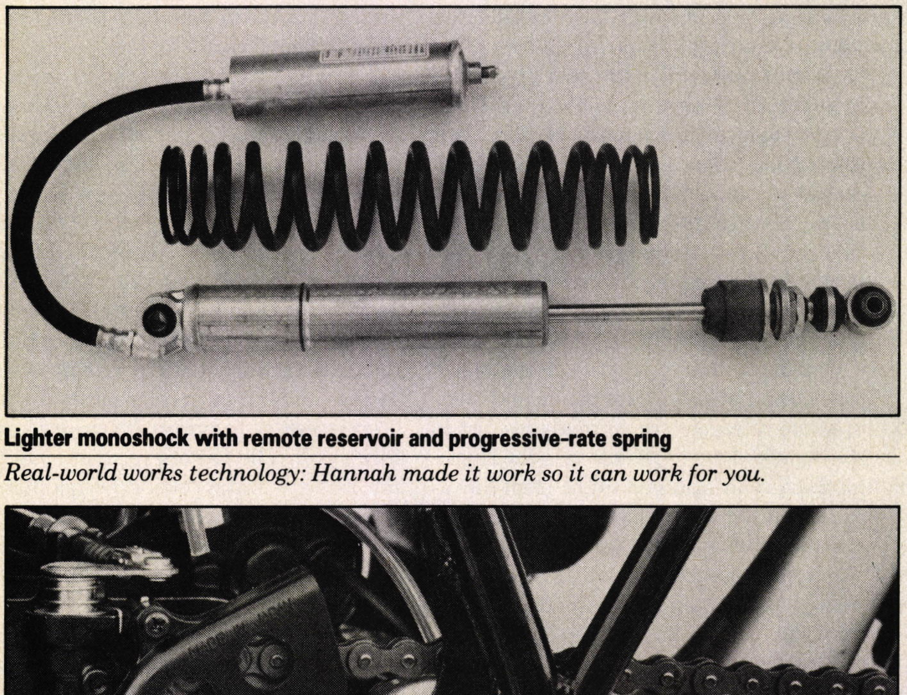
Easy-reach damping, preload adjustments

The convenience is at last convenient.



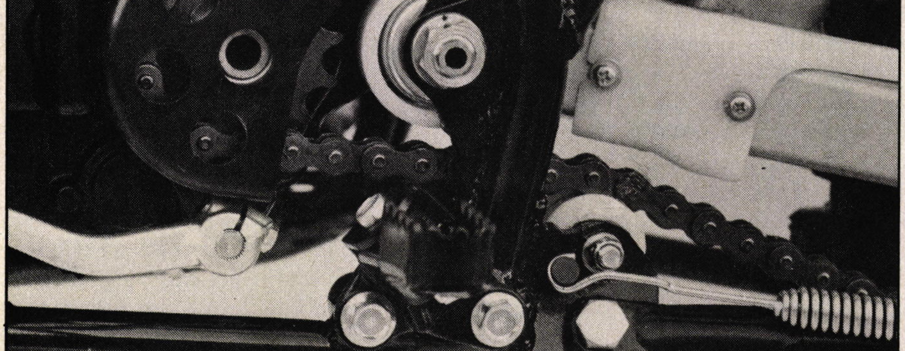
Efficient two-stage foam element

But the filter-to-airbox seal is iffy.



Lighter monoshock with remote reservoir and progressive-rate spring

Real-world works technology: Hannah made it work so it can work for you.



Cozy sprocket-to-pivot relationship

No more flap about chain flop.

But it steers precisely everywhere else, and when you're blazing over the rough stuff—which is where the fast guys make time—that penchant for going in straight lines becomes a welcome blessing.

What that all boils down to is that any misbehavior of the rear wheel, be it side-hopping or sliding out, happens infrequently. And when it *does* happen, the rear end steps out slowly enough that you can calmly and accurately correct it. You can, in fact, get a little bit crazier on the YZ250G than you've ever gotten on any other bike and still expect to come out of it more-or-less upright and in control. After all, Hannah had something to do with the chassis, and who knows more about berserko Yamahopping than he does?

Not all of the YZ's newfound competence, however, stems from its chassis. The 246cc engine may look like last year's motor on the outside, but there's important new stuff on the inside. And the power that comes churning out of the revamped six-speeder is some of the most impressive we've ever witnessed from a two-stroke. Not that the peak power is overwhelming, although it's nothing to sneeze at; instead, it's the laser-sharp crispness of the throttle response and the eye-opening low-end/midrange wallop that amaze. Until you get accustomed to the YZ's disposition (friendlier than most), you'll often enter a corner thinking that you should have downshifted one more time to prevent bogging, only to find that thwacking the throttle open sends you barreling out of the turn on the rear wheel. And if the revs *do* drop too low, a quick 125-like fan of the clutch lever will make the YZ lunge out of the corner like a Top Fuel dragbike.

All of that midrange originates with the same basic 38mm Mikuni and six-petal reed block as used last year, but with a lower, wider intake port. The transfers are taller and have been re-angled to improve the cylinder-filling characteristics, and the exhaust port is now "eyebrowed" on its top half for more-complete scavenging. The exhaust port also was given a center bridge to prevent the dual piston rings from snagging in the wider port window. And while most of those changes are geared toward boosting power in the upper half of the rpm range, the exhaust system's larger volume and tapered header pipe help to broaden the powerband. And according to Yamaha, the bulk of the G's mid-rpm punch is the result simply of retarding the entire ignition curve as used on the F-model by a few degrees.

Whatever the claims, the engine sure works impressively out on the track, and you have Hannah to thank for much of it.

You see, he insists on short-shifting his own 250 as though it were an Open-class bike; and so Yamaha's engine specialists had to concentrate on wringing massive quantities of midrange torque from the OW40, but without a loss of peak power that could render him uncompetitive on the straights. Ultimately, that powerband technology worked its way down to the YZ250G. So despite having taller (lower numerically) third, fourth and fifth gears and 10-percent-taller overall gearing than the F-model, the new YZ will blow last year's into the weeds in every way—in straightaway speed, in midrange acceleration and in exploding out of the corners.

Some people may think the YZ250G's power a little *too* explosive and intractable to be manageable on slick track surfaces; but the engine's wide powerband accommodates even earlier upshifts (which help limit wheelspin) and the throttle response is so linear that the power flow is controlled easily by sensible regulation of the throttle. Moreover, the world-class chassis works full-time on the YZ keeping the 5.10x18 rear knobby hooked up to the ground more often than reason suggests it should. So while the 250G certainly does not have the soft power delivery of, say, the European-bred RM250T, the Yamaha should prove more competitive, at least powerwise, on the fast tracks that prevail on this side of The Pond.

Actually, it's just about impossible to point out any area of the YZ250G that *isn't* competitive. It's comfortable, starts easily, stops exceptionally well and seems to have no pieces that are bent on self-destruction. Even chain life should be extended this year, since the new engine cases are narrower and shorter to let the swingarm pivot be moved right up next to the countershaft sprocket. That proximity minimizes fluctuations in chain slack without the need for a spring-loaded tensioner.

Come to think of it, we had just two gripes about our test YZ. One concerned the clutch, which upheld Yamaha's tradition of grabby clutches by engaging so abruptly that we found it difficult to make consistently good starts. Then there is the YZG's airbox, whose size and shape were compromised by its need to clear the monoshock at full suspension compression. It does that very well, but in the process makes checking the filter-to-airbox seal around the perimeter of the two-stage foam element a near-impossibility. That's why, until we became aware of the problem, our YZ sucked some dirty air through the intake. If you're extra careful when installing the filter, this design problem should cause you no long-term grief.

So much for caution in assembling the G's bits. In terms of *riding,* if you're not overcautious on this YZ, you're liable to find yourself going faster and finishing better on it than you have on any other bike. That's because this is one of those very special motorcycles that makes you feel like you can do no wrong.

None of this should come as a surprise, for Yamaha's sizable collection of national and international MX championships has long been proof of the company's ability to build world-class works bikes. What this YZ proves, once and for all, is that Yamaha also can build world-class production motocrossers.

So if you think that there's a little bit of Bob Hannah in you, you owe it to yourself to take a long, hard look at a YZ250G. Because it has a *lot* of Hannah in it. •

Ride Review

• Step right up, gents, and introduce yourselves to the niftiest Yamaha ever to grace a motocross track. You say you're tired of your Suzuki RM250's finicky cornering habits? You say you don't know where your Can-Am 250 MX-5 is going to land when you twist the throttle hard? Well plant yourself in the saddle of the YZ250G, an end to motocross drudgery forever.

Yes, there are motorcycles that require constant attention to get them around a track quickly, but the Yamaha is not among them. Its suspension gulps whoops and braking ripples whole. The brakes operate with retro-rocket efficiency. The engine spins out the power Yamaha riders are accustomed to, but at last there's sufficient low end to get you out of tough spots without fanning the clutch like a gunfighter. But most of all, the chassis tracks and steers and corners and slides around a motocross circuit almost by itself.

I suppose the YZ250G's specifications bear some inspection, but I'm more fascinated by the way it turns fast laps with ridiculous ease. The rider's only requirements are enough hands and feet to operate the controls and a fascination with the ¼-turn throttle. Just turn on the gas and let the bike do the rest. It works like magic. You'll soon find your way to the front of the pack. *—Michael Jordan*

• Let me make one thing perfectly clear: I used to hate Yamaha monocrossers. They were top-heavy, slow-turning and difficult to ride. Yamaha unleashed new improvements every year, but the whole package never came together for me.

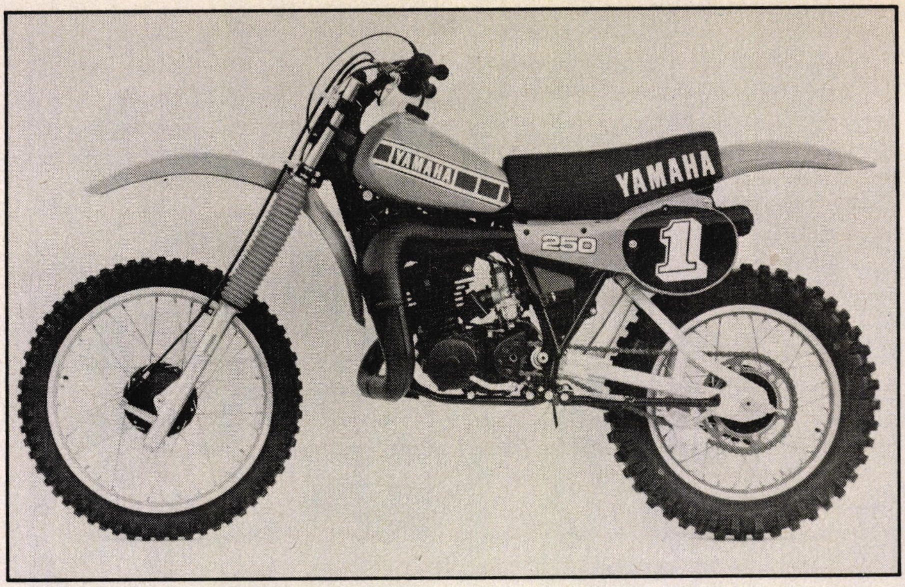
But now I've changed my mind. The YZ250G is so good that it makes me think Bob Hannah has had a cheater's advantage for the last two years. After less than half an hour on the new YZ, I was riding as fast or faster than I ever had on any motocross bike. Because its chassis is long, the G felt a little slow in the tight corners, but it more than made up for it on the rest of the track. First of all, the G's soft suspension keeps the wheels on the ground better than any bike I've ever ridden, allowing the famous Yamaha brakes to be used to their full potential. That in turn allowed me to hold the throttle on until the last millisecond, yet still make the corners. Also, the uncontrollable power that's been Yamaha's trademark finally has disappeared. The 250 still has explosive power, but the transition into the powerband is far more predictable.

Now that I've discovered the source of Hannah's magic, all I have to do is convince Yamaha not to sell any more G models—and let me keep this one. That way, Hannah will be my only competition.

—Dean Taylor

Continued

Yamaha YZ250G



SPECIFICATIONS:

IMPORTER: Yamaha Motor Corp., U.S.
6555 Katella Ave.
Cypress, California 90360

CATEGORY: motocross

SUGGESTED RETAIL PRICE: $1898

ENGINE

Type	two-stroke vertical single
Port arrangement	one reed-valve-controlled intake, four main transfers, one booster transfer, one exhaust
Bore and stroke	70.0mm x 64.0mm
Displacement	246.3cc
Compression ratio (corrected)	8.1:1
Carburetion	one 38mm Mikuni slide/needle
Air filter	two-stage washable oiled foam element
Lubrication	pre-mixed fuel and oil
Starting system	primary kick
Ignition	internal-rotor magneto CDI
Charging system	none

DRIVETRAIN

Primary drive	helical gears
Primary drive ratio	2.625:1
Clutch	wet, multi-plate
Final drive type	#520 chain (⅝-in. pitch, ¼-in. width)
Final drive ratio	14/48:3.429:1

Gear	Internal gear ratio	Overall gear ratio	MPH per 1000 RPM
I	2.14	19.29	4.1
II	1.81	16.31	4.8
III	1.41	12.71	6.2
IV	1.14	10.29	7.7
V	0.96	8.61	9.2
VI	0.86	7.88	10.0

SUSPENSION/WHEEL TRAVEL, IN.

Front	air-spring, 38mm stanchion tube diameter/11.2 in. (284mm)
Rear	monoshock, 15mm spring preload adj. 25-position damping adj./11.6 in. (295mm)

BRAKES

Front	drum, single-leading shoe
Rear	drum, single-leading shoe, rod-operated

TIRES

Front	3.00x21 Bridgestone Motocross M21
Rear	5.10x18 Bridgestone Motocross M20

DIMENSIONS AND CAPACITIES

Weight	217 lbs. (98.4kg)
Weight distribution	46.5% front, 53.5% rear
Wheelbase	57.3 to 58.3 in. (145.5 to 148.0cm)
Seat height	37.7 in. (958mm)
Handlebar width	33.5 in. (851mm)
Footpeg height	16.2 in. (411mm)
Ground clearance	13.4 in. (340mm), at frame cradle
Steering head angle	30 degrees from vertical
Front wheel trail	5.19 in. (132mm)
Frame	tubular chromoly steel, single front downtube
Fuel tank	plastic, 2.0 gal. (7.6l), no reserve
Instrumentation	none

PERFORMANCE

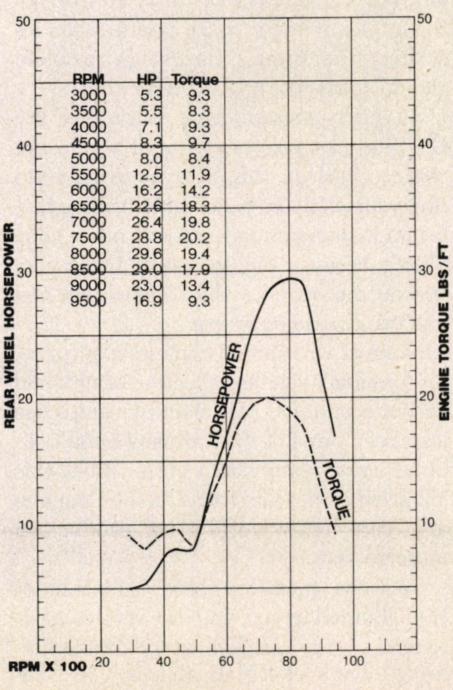
Top speed (calculated)	80 mph (129 kph)

All weights and measurements are taken with machine unladen and fuel tank empty.

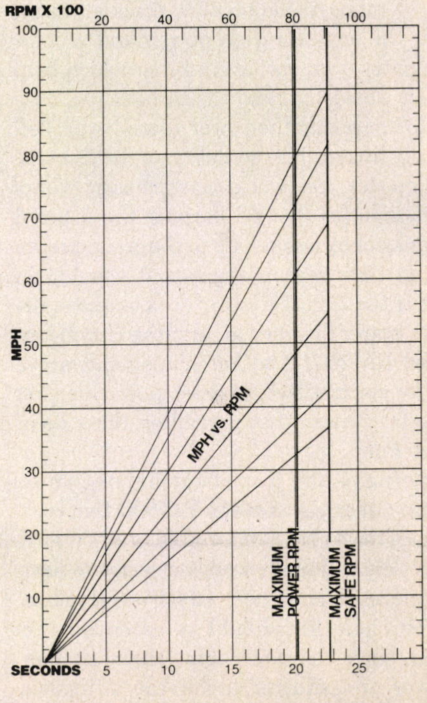
COMPARATIVE TEST DATA:

Make & Model	Horsepower	Wheel Travel Front/Rear, in.	Weight (fuel tank empty), lb.	Weight bias Front/Rear percent	Transmission, number of speeds
Yamaha YZ250G	29.6	11.2/11.6	217	46.5/53.5	6
Yamaha YZ250F	28.0	10.7/10.4	220	47.0/53.0	6
Can-Am 250 MX-5	32.1	10.8/10.0	218	45.9/54.1	5
Honda CR250R	27.7	11.8/11.0	220	45.9/54.1	5
Husqvarna 250 CR	24.3	11.8/11.8	227	44.5/55.5	6
Suzuki RM250N	27.1	11.2/11.8	218	46.3/53.7	5

PERFORMANCE:



RPM	HP	Torque
3000	5.3	9.3
3500	5.5	8.3
4000	7.1	9.3
4500	8.3	9.7
5000	8.0	8.4
5500	12.5	11.9
6000	16.2	14.2
6500	22.6	18.3
7000	26.4	19.8
7500	28.8	20.2
8000	29.6	19.4
8500	29.0	17.9
9000	23.0	13.4
9500	16.9	9.3



MINITEST:

Suzuki TS250T

Since when is "average" a dirty word?

• It's a fair question. Why should you care about Suzuki's TS250? The bike, after all, is one of those oft-maligned dual-purpose bikes, perfectly willing to stand neglected in a corner with no pretensions of proximity to the cutting edge of anything; clearly a spear-carrier of a machine if ever there were one. Why, right up front you know that it'll never earn a page in the *Guinness Book of Records*. Probably wouldn't know a superlative if it saw one. So what's in it for you? Why even bother? Well, first of all, because it works.

But put away your light-speed hyperbikes and gnarly berm-crunchers. Don't plan on setting the TS against a YZ anything just because it's a two-stroke single with knobettes on its tires; and likewise don't drop the TS into a cauldron with some full-time street bike just because it's DOT-approved. Either comparison would be just about as pointless as proving that a CB750F can't cut competitive lap times around a motocross course. Well, to be fair, neither can the TS. Oh, it'll circle the track all right, but you're still working an apples-to-oranges deal. Testing the TS requires a little different approach: Pick a direction and go.

If the first place you've headed happens to be a strip of freeway, you'll begin to notice the earmarks of The Great Compromise in the way that the trials tires wander in and around the rain grooves. The universal rubber also gives the impression that it might suddenly lose all interest in adhering to the pavement—like when you're cranked over on an on-ramp. If you intend to keep up with the traffic flow, the single cylinder pounding beneath you will make its presence felt through the bars, footpegs and seat. Real-life highway speeds will keep the tachometer needle hovering near its seven-grand redline, while pushing any faster simply will convince you that Chicken Little was right. You begin to wish for a sixth gear that isn't there. Still, despite the sensory input that screams that everything surely must come apart, it doesn't.

Suzuki TS250T

IMPORTER: U.S. Suzuki Motor Co.
13767 Freeway Drive
Santa Fe Springs, California 90670

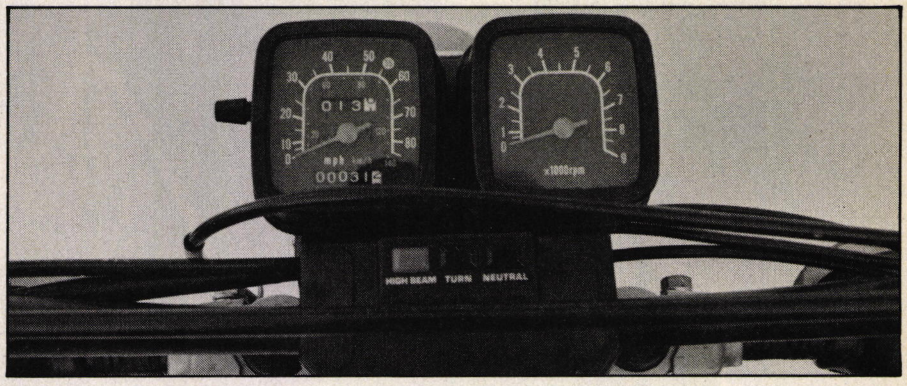
Category	dual-purpose
Suggested retail price	$1449
Engine type	two-stroke vertical single
Port arrangement	one piston-controlled intake
Bore and stroke	70.0mm x 64.0mm
Displacement	246.1cc
Carburetion	one Mikuni 29mm slide / needle
Gearbox	5-speed
Final drive ratio	2.666:1
Front fork / wheel travel	36mm stanchion tube diameter / 7.2 in. (182.9mm)
Rear shocks / wheel travel	5-way adjustable preload / 5.0 in. (127.0mm)
Wheelbase	55.3 to 56.0 in. (140.5 to 142.2cm)
Seat height	33.3 in. (845.8mm)
Weight	270 lbs. (122.5kg)
Top speed (observed)	74 mph (119.1 kph)

In fact, pulling off of the highway and onto surface streets begins to pull things together. The TS is light enough to be flicked around easily, the seat height is low enough for comfort and the quarter-liter's moderate acceleration still is faster than what's on four wheels.

Much of that competence extends to where the pavement leaves off, though in the dirt the TS loses some of its luster to its playbike stablemate, the DS250T. Both bikes were drawn to the same spec, down to gear ratios, steering geometry and carburetion. Major differences between the two 250s center on the TS's slightly softer primary and secondary spring rates, trials universal rubber in place of the knobbies on the DS and 18 extra pounds worth of instrumentation, street-legal lighting and battery. The weight and tires might seem a small difference, but they take on some significance when you try to push the TS harder than its playbike parameters allow. While the DS will wheelie over an obstacle with moderate effort, the TS has to be worked hard. And if the terrain doesn't afford good traction, the trials rubber breaks loose and what you end up with is a giant roost of dirt and precious little forward movement. Still, as a straight streetable playbike, the TS is content to plonk onward until you tell it to stop.

That last line could be the epitaph for any good dual-purpose bike, which the TS is. Ridden within the bike's built-in limitations, it will haul you just about anywhere. And that's superlative.

—Larry Works

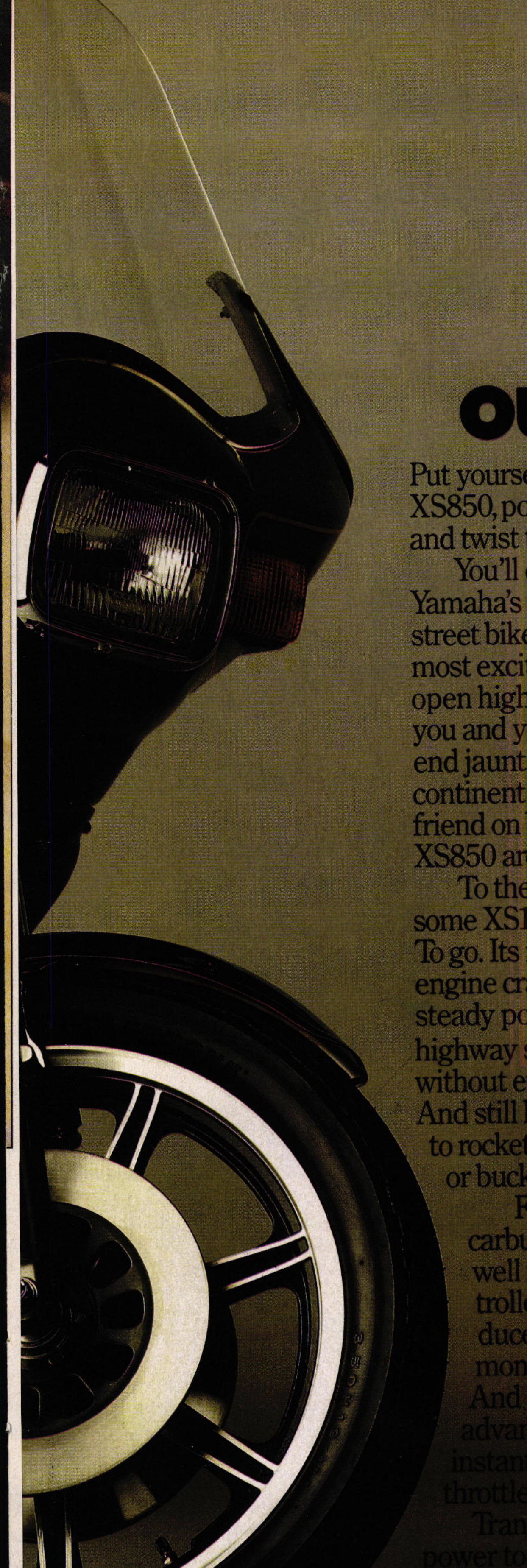


Suzuki resorts to instruments by Westclox on the streetable TS

But when the clock strikes seven you won't be able to read either of them.

YAMAHA
XS
Eleven
YAMAHA

Rear view mirror(s) standard equipment. Always wear a helmet and eye protection.



HOW TO GET OUT OF TOWN. FAST.

Put yourself on an XS11 or new XS850, point yourself out of town and twist the throttle.

You'll quickly discover Yamaha's two biggest and best street bikes are also the fastest, most exciting ways to sail the open highway. Whether it's just you and your bedroll on a weekend jaunt, or a full-dress, cross-continent expedition with a friend on back, the XS11 and XS850 are designed to travel.

To the left, you see an awesome XS11, with everything. To go. Its in-line four-cylinder engine cranks out tremendous, steady power. It can cruise at highway speeds all day long without even breathing hard. And still have plenty of guts left to rocket around 18-wheelers or buck a head wind.

Four constant-velocity carburetors keep the beast well fed. Transistor-Controlled Ignition (TCI) produces reliable, carefully monitored electrical output. And Yamaha's vacuum advance system responds instantly to the slightest throttle command.

Transferring the raw horsepower to the pavement is a five-speed constant-mesh transmission and fully enclosed direct-coupling shaft drive system that keeps you rolling smooth and quiet, mile after mile. Virtually maintenance free.

Our brand new and unique XS850 in-line triple delivers all the power of a four-cylinder engine. But its very narrow and light three-cylinder design affords superb handling. Shaft drive, TCI, and a special oil cooler for prolonged engine life make the XS850 a fast, reliable highway hauler.

Both superbikes come with fully adjustable rear shocks and air/spring adjustable front forks.

And no matter what kind of riding you like to do, you can dress for the occasion in genuine Yamaha accessories like you see here. All made to measure, with fasteners that fit, colors that coordinate and lines that integrate.

Next time you get the urge to get out of town fast, climb aboard an XS11 or XS850. You'll find the shortest distance between two points is a Yamaha.

YAMAHA

When you know how they're built.

Honda CB400T Hawk

Looks like and tastes like the high-priced spread.

BY DAIN GINGERELLI

High-performance street bikes generally are recognized as big, mean and gnarly. Few people include 400cc twins in this category. But everyone will have to reconsider when it comes to the Honda CB400T Hawk. It's a member of the sporty-bike clique. The obvious give-away, of course, is the styling it shares with the Honda CB750F, one of the best-handling motorcycles on the road.

But by itself styling doesn't make a high-performance motorcycle. The sport bike's merits are judged on how well it performs through a lonely stretch of twisting blacktop, or how fast it accelerates from a standing start. Not coincidentally the Hawk shines brilliantly here, too.

This test isn't a comparison of the Hawk to the CB750F, though, because while one is a four-cylinder superbike, the other is a medium-displacement twin. But to put the Hawk in the same sport-bike category as the 750F says quite a lot. Which is exactly what Honda intended in the first place.

You see, the 400T reflects a growing concern at Honda to maintain a sporty image, even in the under-500cc market. Sure, Honda already had the Type II Hawk, but it just wasn't recognized as a performance motorcycle by the people who mattered—the consumers. The desire for a musclebike in this class has increased over the past few years because of escalating prices that have put some superbikes out of financial reach for many enthusiasts.

Rather than simply restyle the Type II, Honda decided to make the European version of the Hawk, the CB400N, available in America. The Euro-Hawk features a six-speed transmission and CB750F (CB900F in Europe) styling, qualities that boost the Hawk's image to sport-bike status. Of course, there were some necessary modifications to Americanize the Euro-Hawk, changes that include higher handlebars, more conventional footpeg location instead of the European-spec rearsets and minor retuning of the engine to satisfy EPA-think. The result of that tweaking is the only Honda 400 twin to carry the Hawk name into this decade. All of Honda's other 400s are listed simply as CM400s, including the drum-braked, spoke-wheeled Type I.

Not only is the Hawk the only street sport model in the sub-500cc Honda lineup, it has the only six-speed transmission. And the additional transmission gear makes a big difference in the Hawk's sportier personality when compared to its Type II predecessor. Sixth gear is slightly taller (lower numerically), providing a mild overdrive compared to the five-speed. And by spacing first- (which has the same ratio as first gear in the five-speed gearbox) and sixth-gear ratios further apart, Honda was able to insert an extra gear so the new transmission ratios all are closer together. This means less rpm drop during upshifts, so you can make smooth, positive shifts with more power readily available in the next gear.

The benefits of the Hawk's six speeds especially are apparent in around-town riding. It's easy to build to speed by revving the engine to about 6000 rpm before shifting in all the lower gears. Once in top gear, the Hawk willingly maintains a legal 55 mph at about 5500 rpm. Under these conditions our test Hawk churned out more than 60 miles to the gallon. With the 3.4-gallon gas tank, that's an effective range of better than 200 miles, a point to consider even in a sport bike.

Taking it easy on the Honda produces its own rewards, but there's another kind of acceleration you'll want to do with the Hawk. It involves taking the tach needle full sweep to its 10,000-rpm redline. It'll do it without hesitation in all the lower gears. Power pops in strong just after 7000 rpm, and you make your shifts exactly when the needle brushes 10,000. Thanks to the close-ratio gearbox, the revs drop off minimally and never fall below 7000 between shifts. And *that's* the real benefit the extra gear provides.

But don't think of the added gear as the only change to this engine. There is more, thanks to the new and more-stringent 1980 EPA regulations. Although Honda stuck with its three-valve head, there are modifications to the combustion chamber to prevent low-rpm pinging caused by leaner jetting in the carbs' low-speed circuit. Basically, the squish band was reshaped to better control the burning of the charge and for more-efficient scavenging. The reshaping involved a reduction in the volume of the combustion chamber while maintaining the 9.3:1 compression ratio. To do this, the piston dome was flattened and a larger relief pocket was machined for the single exhaust valve. Honda engineers say this engine can burn unleaded gasoline and, as we found out, still give good performance and fuel economy (60-plus mpg was not uncommon burning unleaded or premium).

Since EPA requirements are measured at low rpm, Honda was faced with a decision either to lean-out the existing 32mm CV Keihins or start all over. Rather than try to make do with the existing carbs, the 32s were dropped in favor of 30mm units. By using carbs with smaller venturis, the Hawk engine could be made to burn sufficiently lean mixtures to meet EPA mandates, yet still have good throttle response at low rpm. Surprisingly, the main jets on the new 30mm Keihins are *larger* than those on the 32s. And to help provide even better response, a single mechanical accelerator pump was integrated to the intake system.

Left untouched are the dual dynamic counterbalancers incorporated into the original Type II Hawk, so the latest version is still one of the smoothest-running small-bore twins around. Also unchanged are the Tri-Pulser CDI ignition and the 39 horsepower that Honda claims for the bike (in comparison, the European Hawk has a claimed rating of 42 hp). According to a Honda spokesman, the power curve and peak power are virtually identical to last year's Type II engine. Considering all the carburetion and combustion chamber changes, that's a tribute to Honda's engineering staff.

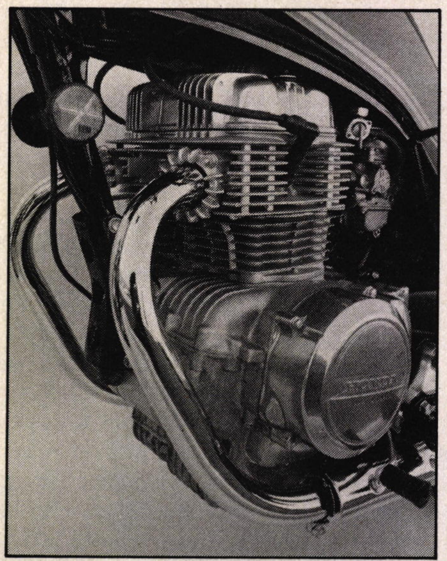
Although some motorcycles have suffered in cold starting with new EPA-legal carbs, the Hawk hasn't. Cold starting on the Honda consists of pulling out the choke knob, letting the engine warm to temperature for no more than a minute, then riding away. If you are in a hurry, the Hawk will accelerate smoothly with the choke on until the engine warms.

Once underway, the Hawk reaffirms its high-performance image by handling the way a sport bike with 750F-bloodlines should. The Hawk can tie a series of odd-radius turns together so gracefully that the road seems almost straight. Although we didn't get the opportunity to test its handling to the fullest—on the race track—we talked with one rider who entered a new Hawk in the Box Stock class at a roadrace. He said his bike handled well around the track, and since Honda made no changes to the frame geometry and suspension from the Type I and II Hawks, we have to agree. One of our Boss Stock project racers, a Type I, was chosen by all our riders as the best-handling 400 in our three-bike stable, which included a Yamaha RD400F and a Suzuki GS400.

Much of this good handling is a result of the diamond-configuration frame that had its origins in Honda's RCB roadrace efforts in Europe. Basically, the design uses mass centralization to position as much of the bike's mass as close as possible to the center of gravity, thus reducing the bike's polar moment in all planes. And although this has made for a rather high center of gravity, a steep steering-head angle and short front-wheel trail help the Honda handle nimbly, while the high *cg* causes it to react predictably. In simple terms, when you point the Honda Hawk for a turn, it goes exactly where you direct it.

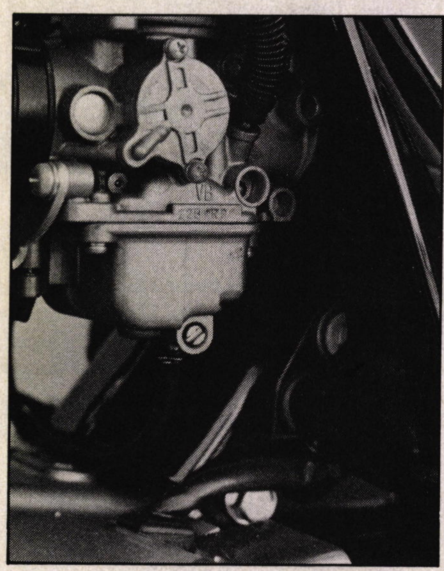
The major drawback to this design is that it requires stiff suspension rates so the bike won't wallow excessively while cornering. So in medium-speed turns (about in third and fourth gears) the Hawk feels race-steady. It's not uncommon on the Hawk to tilt the horizon more than you are accustomed to and still maintain the impression that the bike is on rails. Because

Continued



EPA-legal engine with 39 horsepower

And a six-speed tranny to boot.

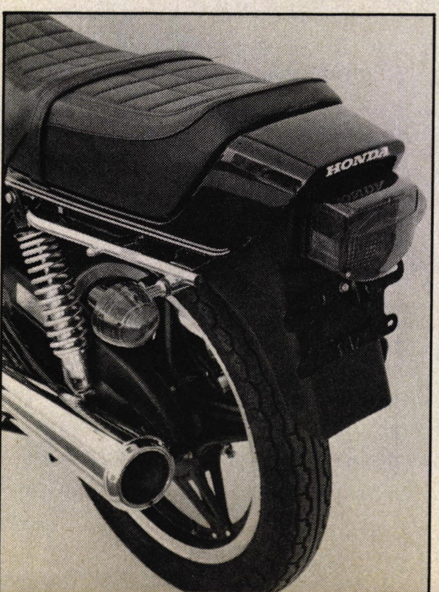


30mm CV carbs with accelerator pump

More attention to fewer emissions.

New seat, mufflers, and black ComStars

750F styling in three-quarter scale.



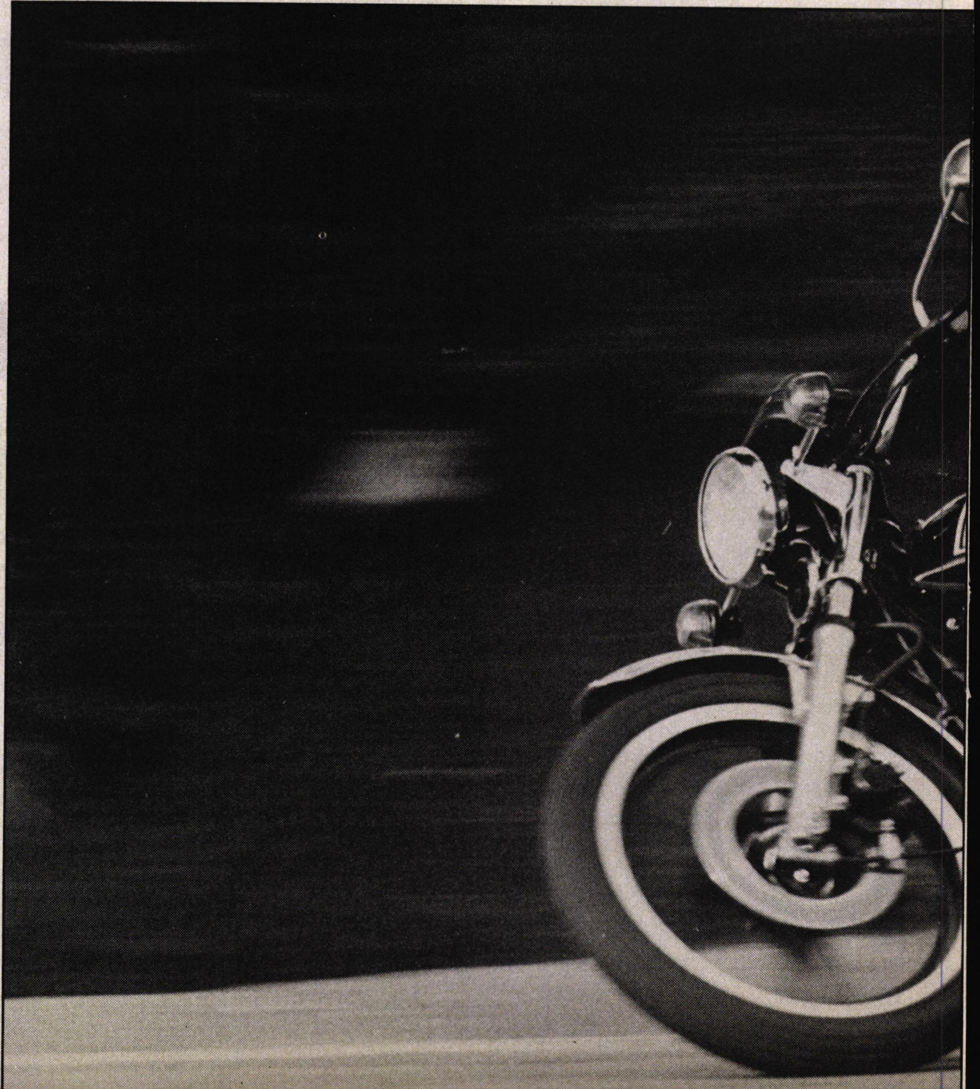
the footpegs are so low and the bike leans over so far, you can touch their tips to the pavement with little effort. Don't be alarmed, though; the folding pegs serve as feelers, warning that you should end your attack and begin to straighten up, or at least not lean any further.

Despite the rock-steady attitude at medium speeds, our test Hawk displayed the same head-bucking tendencies our Boss Stocker experienced when the speedometer hovered higher. The problem wasn't as acute on the racer, though, thanks to smooth racetracks, Dunlop K81R-compound tires and low handlebars, but it was apparent. The problem probably is due to too-stiff springs front and rear and not enough damping. And so the rider feels the front-end hop when the suspension has to work overtime at speed. Our 1980 Hawk seemed to have a more pronounced bounce, probably because it had stock tires and high handlebars, which themselves exaggerate the feedback to the rider through extra leverage.

But in all fairness, you won't encounter this bucking with your Hawk while knifing through your favorite stretch of road at less than ten-tenths. By keeping your pace a notch or two lower, you'll dive from one corner to the next, never having to exert yourself other than to make sure you set up for the proper line. And in this kind of riding, the Hawk excels. Soon you become engrossed in letting the engine work itself to a peak-power frenzy, liberally using the six-speed transmission while jabbing the disc-front, drum-rear brakes for hairpin turns. The entire time, if you do things right, the Hawk feels like it's capable of even running the Bol d'Or. Keeping a sensible pace, it's difficult to find fault with this bike's handling.

But as hard as it is to fault the stiff suspensions when you're out carving up the twisties, when you plant the Hawk's wheels on the freeway, or on roads that have irregularities on the surface, the ride is choppy and bouncy. Thanks to the basic design of the chassis, the stiff suspension works against, not for you. Both ends of the bike (especially the rear) dance up and down, making you anxious to reach your off-ramp in a hurry.

The hard seat doesn't make things any more pleasant. During the first 1500 miles, our Hawk's seat bordered between rock-hard and barely pliable. But as the miles wore on, it loosened and began to conform to the human anatomy. We experienced



the same characteristics with our CBX and 750F test bikes, although the Hawk's seat was harder from the very beginning and didn't soften up as much.

Even so, the seat's profile seems perfect for sport riding because the contour allows you to move your body weight from side to side with little difficulty. As we all agreed, the seating position gave our test riders the impression that the CB400T actually handled peg-dragging sessions better than previous Hawks we had tested. This fallacy probably was nurtured by the Type II's better-padded seat, which gave the illusion of a cushier ride.

One thing we all agreed on, though, was the Hawk's swoopy styling. Even though it looks like a mini-clone of the 750F, we all liked it. Honda doesn't try to conceal that concept, either. The little twin shares equal billing in some of Honda's advertisements with the CBX and 750F. That's because Honda doesn't want this bike passed off as just another run-about four-stroke twin, used to chase odds and ends around town, with an occasional obligatory Sunday morning get-away for its owner.

And it's this bold styling by Honda that will enable this bike to live up to its potential. More than once our Hawk was the center of questions by interested people wanting to know what displacement it was (Honda slyly omitted any 400cc emblems from the side covers). The response on hearing that it is a 400 was about the same from everyone, registering between shock and surprise.

It should come as no shock to anyone, however, that a 400cc twin can attain legitimate sport-bike status. With light weight on its side, the Hawk's chassis and engine work together instead of against one another. The result is a bike that answers your commands instantly and zings around corners with speed that will be the envy of 750cc riders.

In the past ten years, two bikes—Honda's own CB400F and the Yamaha RD400—dominated the small-bore high-performance market. Their demise left large shoes to fill. The measure of the Hawk's success lies in the way it makes you forget all about those antiquated crackerboxes. Yes, it's well-known that riders with less than $2000 to spend are very interested in value per dollar. But the sporting Honda Hawk demonstrates that value means more than just a high mpg rating. It's the harbinger of a new era in high-performance bikes. •

Ride Review

• It isn't hard for me to love the EuroHawk as an idea. Small, agile, fast. But the translation from paper to pavement leaves me a little disappointed.

I think the reasons lie not in the bike's performance, but in its appointments. In a word, they look tacky. While the engine and chassis give you first-class *go*, the bits and pieces that make up the Honda's image provide only coach-class *show*. The turn signals, instrument cluster and side panels all suggest that the bike is a kiddy-cycle, not to be taken seriously. But because I know differently, because I found the eminently serious side of the bike at nine-tenths on innumerable back roads, I resent the subtle but strong implication by Honda that a 400cc motorcycle shouldn't get the same "content" as a 750 or 1000cc bike. In its own way it works as well as a 750F, so it ought to look as good too. —*Steve Thompson*

• It all depends on how you view the Hawk. From one angle the downsized pieces don't seem quite fitting, but squint just a bit and the perspective shifts. I heartily approve of the fact that the instruments and turn signals weren't lifted straight from a CBX or an F. I'd much rather that the Hawk gently remind me of its larger stablemates than try to pass itself off as a duplicate of a bigger bike. Instead of having it look out of proportion, the few oversized bits making everything else seem puny, I'd just as soon think of the Hawk as a collection of matched hardware.

Which, fortunately, is easy enough once you're in the saddle. A hard push through some tight corners gives ample proof that everything is in balance. This Hawk is one of a breed that's dear to my heart: little bikes that go like hell. Even with tiny instruments. —*Larry Works*

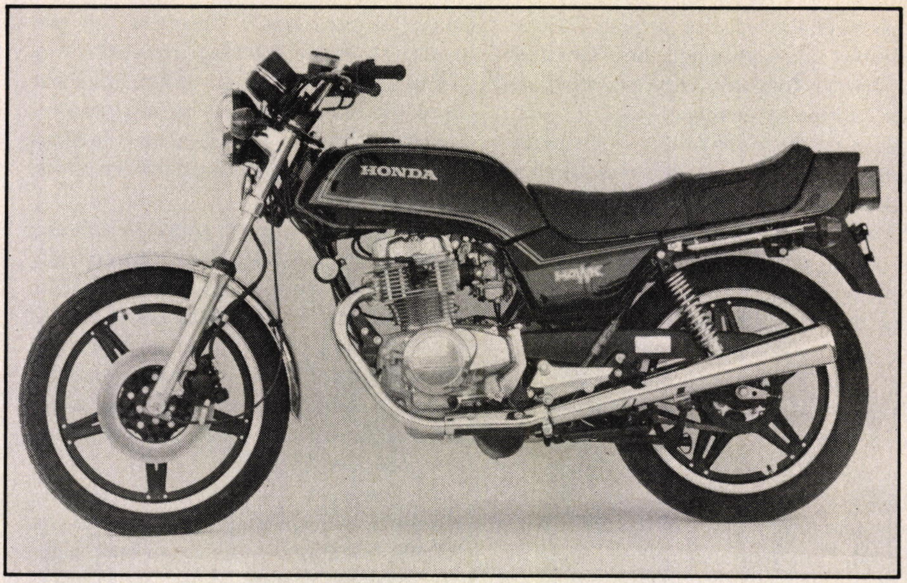
• As the prophet Setright reminds us in his August 1979 column, a motorcycle's visual proportions determine much of our enthusiasm for it. And it's true, the Hawk's graceful lines attract me. Yet as Setright also suggests, proportion in performance is equally important. And it's the Hawk's fine sense of balance between steering, throttle and brake that is the wellspring of my enthusiasm.

Comparing the Hawk's quarter-mile time to those of other bikes doesn't do justice to the taut, crisp way it responds to your every command. Little effort is required. A delicate hand on the controls will sustain your speed through the corners.

Sure, a CB750F is fast. So is a Phantom F4U jetfighter. But when you require agility, order a World War II Spitfire. Like the Hawk, it flies as if connected to your nerve endings. —*Michael Jordan*

Continued

Honda CB400T Hawk



SPECIFICATIONS:

IMPORTER: American Honda Motor Co.
100 W. Alondra Boulevard
Gardena, California 90247

CATEGORY: street

SUGGESTED RETAIL PRICE: $1798

ENGINE

Type	four-stroke vertical twin
Valve arrangement	single overhead camshaft, three valves per cylinder
Bore and stroke	70.5mm x 50.6mm
Displacement	395.0cc
Compression ratio (corrected)	9.3:1
Carburetion	two 30mm Keihin constant-velocity
Air filter	washable oiled foam element
Lubrication	wet sump
Starting system	electric only
Ignition	solid-state pointless CDI
Charging system	12-volt; AC generator, solid-state rectifier, regulator

DRIVETRAIN

Primary drive	straight-cut gears
Primary drive ratio	3.125:1
Clutch	wet, multi-plate
Final drive type	#530 chain (⅝-in. pitch, ⅜-in. width)
Final drive ratio	16/37:2.313:1

Gear	Internal gear ratio	Overall gear ratio	MPH per 1000 RPM
I	2.73	19.75	3.8
II	1.95	14.07	5.3
III	1.55	11.17	6.7
IV	1.28	9.25	8.1
V	1.07	7.76	9.6
VI	0.93	6.73	11.1

SUSPENSION/WHEEL TRAVEL, IN.

Front	32mm stanchion tube diameter/5.5 in. (139mm)
Rear	5-way adjustable spring preload/3.5 in. (89mm)

BRAKES

Front	single-action hydraulic caliper, 11-in. (280mm) disc
Rear	drum, single-leading shoe

TIRES

Front	3.60S19 Yokohama Speedline 992
Rear	4.10S18 Yokohama Speedline 983

DIMENSIONS AND CAPACITIES

Weight	391 lbs. (177.5kg)
Weight distribution	46% front, 54% rear
Gross vehicle weight rating	815 lbs (000kg)
Wheelbase	55.3 to 56.5 in. (140.5 to 143.5cm)
Seat height	30.9 in. (785mm)
Handlebar width	29 in. (736mm)
Footpeg height	right, 12.3 in. left, 12.9 in. (312mm, 328mm)
Ground clearance	6 in. (152mm), at power chamber
Steering head angle	27 degrees from vertical
Front wheel trail	3.9 in. (100mm)
Frame	tubular mild steel, single front downtube
Oil capacity	3.2 qt. (3*l*)
Fuel tank	steel, 2.6 gal. (10*l*), including 1.0 gal (3.8 *l*) reserve
Instrumentation	speedometer, odometer, tripmeter, tachometer

PERFORMANCE

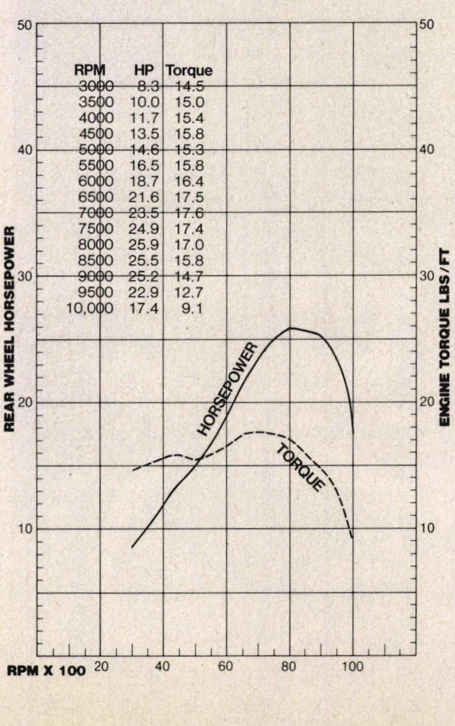
Fuel consumption	50.7 to 65.4 mpg (21.6 to 27.8 km/*l*)
Range, maximum	131.2 to 170 miles (21.8 tp 28.1 km)
Range, reserve only	51 to 65 miles (21.6 to 27.8 km)
Speedometer error, 30 mph indicated	30 mph actual
Speedometer error, 60 mph indicated	61 mph actual
Best ¼-mile acceleration	14.3 sec., 88.6 mph (143 kph)
Top speed (calculated) (observed)	100 mph (161 kph)
Stopping distance from 30 mph	31 ft. (9.6m)
Stopping distance from 60 mph	139 ft. (42.4m)

All weights and measurements are taken with machine unladen and fuel tank empty.

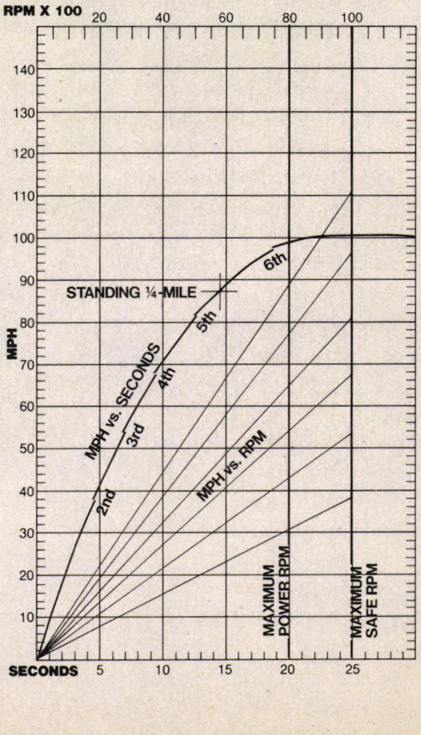
COMPARATIVE TEST DATA:

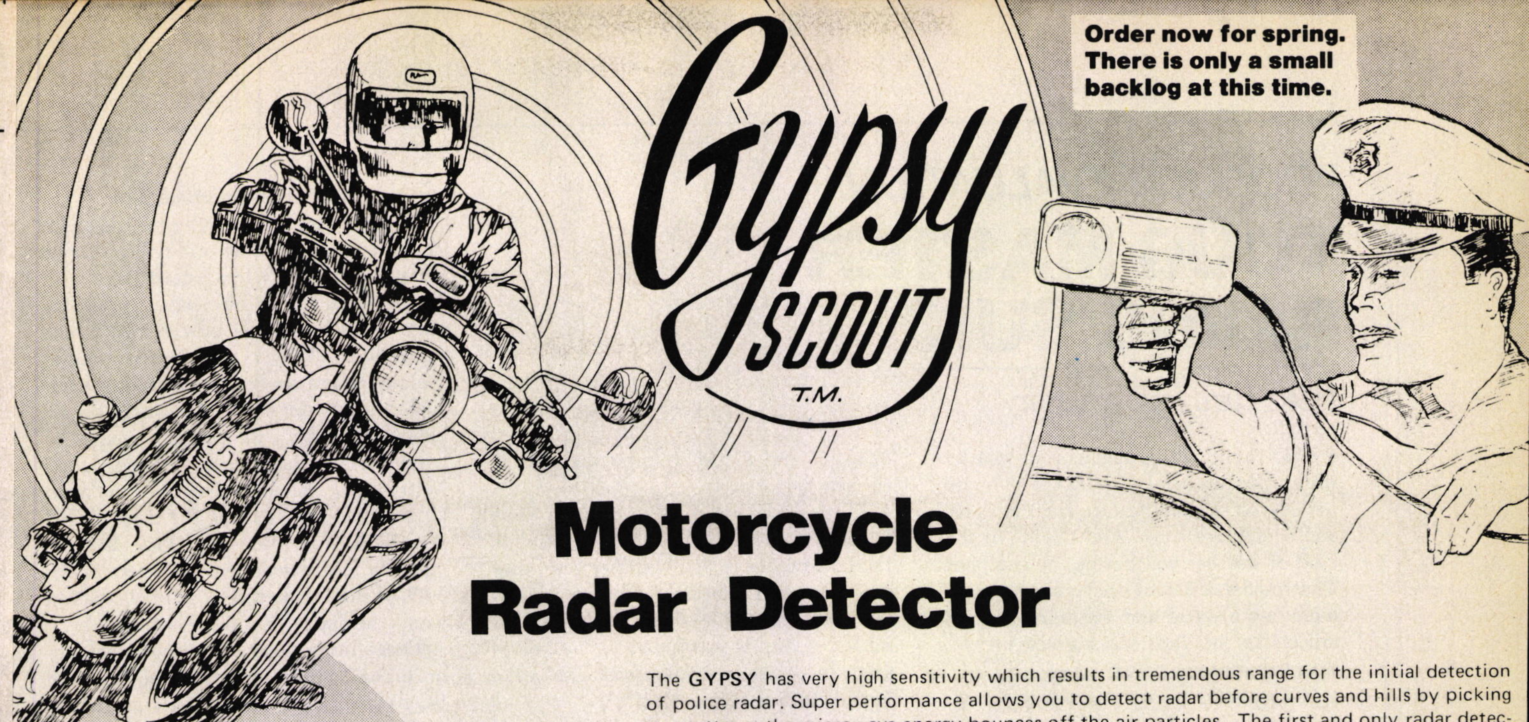
Make	Quarter-Mile, sec/mph	Top Speed, mph	Weight, lbs	Stopping Distance From 60mph, ft.
Honda CB400T Hawk	14.54/87.4	100	391	139
Honda CB400T Type II	14.74/86.30	100	378	132
Yamaha RD400F	14.16/90.18	98	355	129
Yamaha XS400F	14.50/89.50	100	372	NA
Suzuki GS425N	14.59/88.80	NA	382	NA
Moto Morini 3½ Sport	15.75/81.10	96	334	127

PERFORMANCE:



RPM	HP	Torque
3000	8.3	14.5
3500	10.0	15.0
4000	11.7	15.4
4500	13.5	15.8
5000	14.6	15.3
5500	16.5	15.8
6000	18.7	16.4
6500	21.6	17.5
7000	23.5	17.6
7500	24.9	17.4
8000	25.9	17.0
8500	25.5	15.8
9000	25.2	14.7
9500	22.9	12.7
10,000	17.4	9.1





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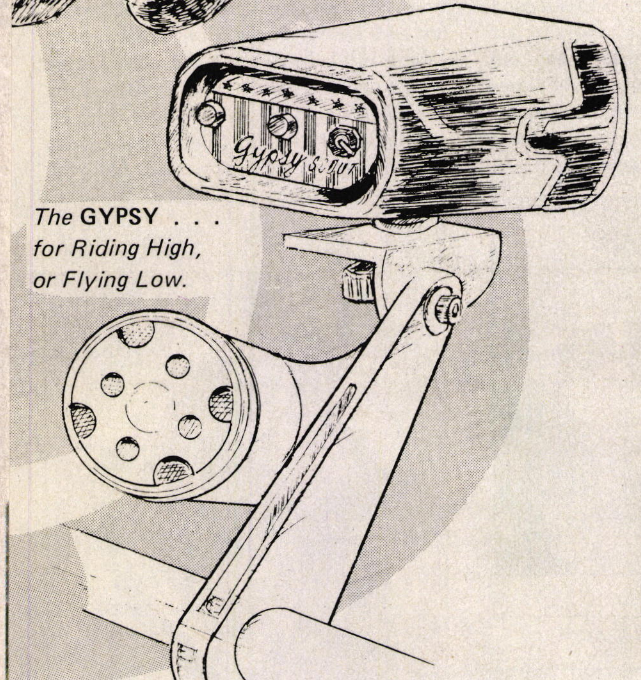

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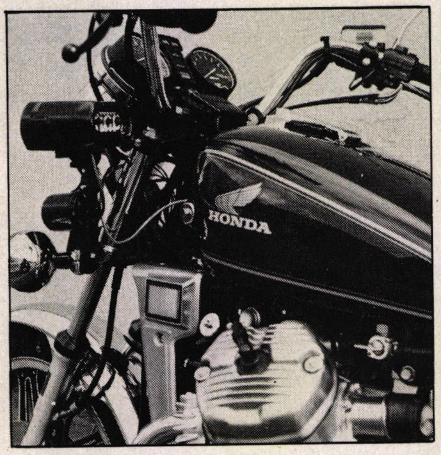

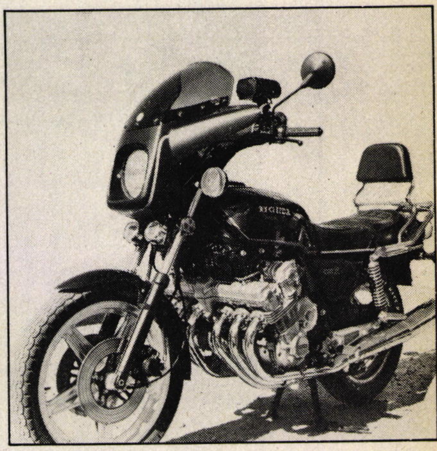

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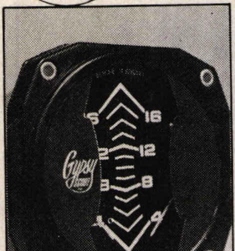

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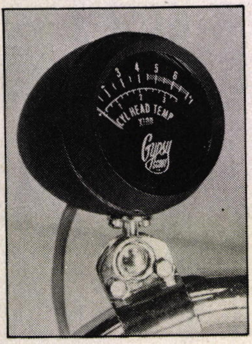

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PRODUCT EVALUATION:

TOUR MASTER RIDING SUIT

It's June in January . . .

• Year-round riding means foul-weather riding. Because somewhere in the 12-month period you're going to face cold, rain, hail and sometimes snow. And to ride in that kind of weather you have to be equipped. That includes having the proper apparel, including a warm and waterproof jacket, much like the Tour Master jacket I rode with this winter.

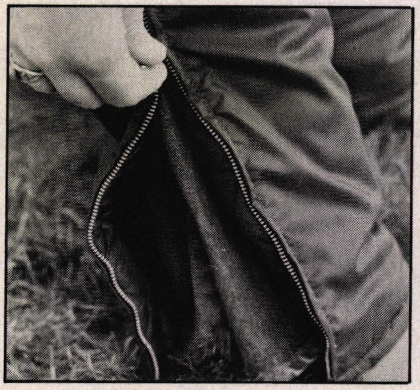
If Tour Master is a name new to you, it's because Helmet House—the parent company—just started the product line last fall, to promote its touring equipment and apparel. Helmet House, 2115 Colorado Avenue, Santa Monica, California 90404, spent more than a year and a half developing the one- and two-piece suits, which sell for $139.95, and $79.95 (pants) and $89.95 (jacket) respectively.

These prices are comparable with those for other foul-weather suits, but getting to the bottom line in foul-weather gear, they are warm and relatively effective against the rain. The bulk of the nasty-weather buffering can be attributed to the heavy-grade nylon shell wrapped around hefty Polarfill insulation.

The tight-weave nylon shell does a good job of insulating against cold and wet, but as sewn-together foul-weather jackets are wont to do, it leaks water through the close-stitch seams in a heavy downpour. Helmet House is aware of the limitations of sewn seams and offers a tube of seam-sealer you can apply for better waterproofing.

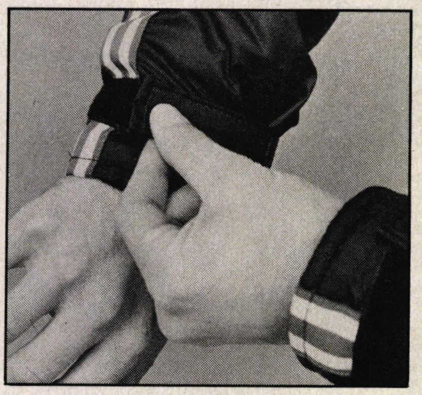
To make sure the collar, sleeve and pants cuffs fit snugly, ⅞-inch-wide Velcro strips serve as fasteners. Velcro is used liberally on the Helmet House offerings, with more than 57 inches of the bristly stuff in the jacket alone. Why so much? According to Helmet House spokesmen, so that the adjustable openings will fit snugly on all riders. In carrying the theme of Velcro for everyone in the house to an extreme, there's Velcro down the entire length of the front zipper's fly-flap, securing the three pocket flaps, and as mentioned, at the collar and cuffs. In fact, there's enough Velcro at the cuffs to close them tightly around a pair of wrists the diameter of handlebars.

These large doses of miracle fastener make the Tour Master a state-of-the-art in Velcro overkill. I would prefer more discretion in its deployment, especially at the collar and sleeve flaps. More than once I caught my helmet's brushed-nylon lining on the exposed Velcro patch at the collar's right side. Perhaps just a 1½-inch strip instead of the 4½ inches would suffice. Ditto for the sleeve flaps; they rubbed the lining



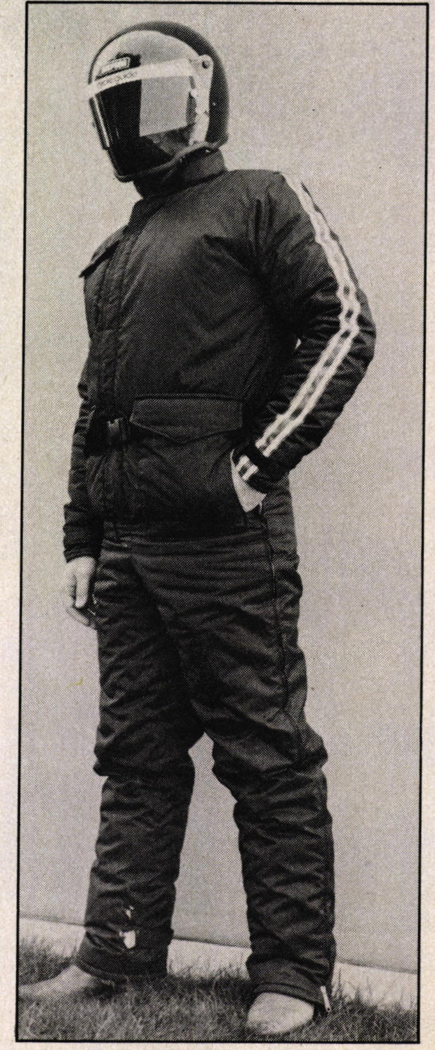
Two-way full-length side zipper

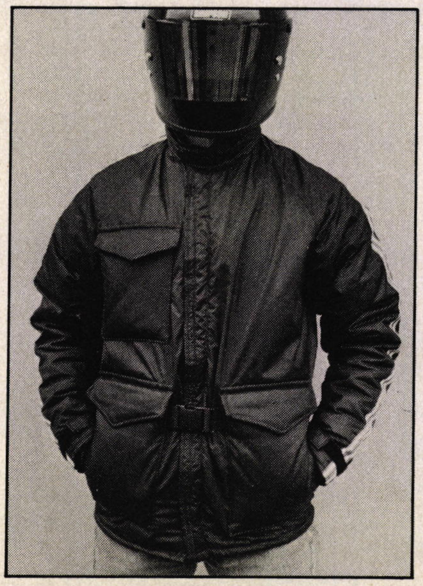
When zipping up means tangling up.

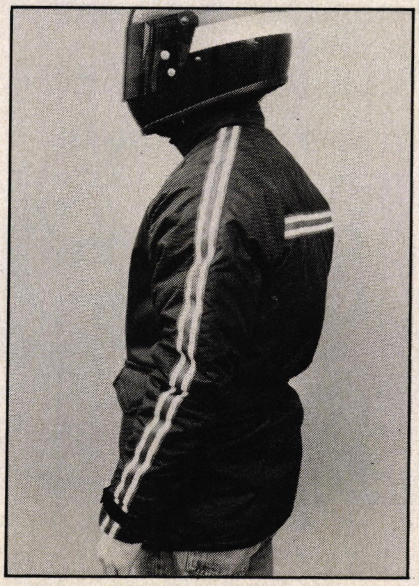


Velcro-adjustable cuffs

An army of Velcro for the Cold War.







of my gloves, making it difficult to tuck the sleeves under the gauntlet. Although Tour Master has winter gloves with a tight-fit gauntlet designed especially for the jacket sleeves, they were too bulky for me.

Unfortunately, there isn't a Velcro flap, or any flap for that matter, covering the pants leg's side zippers. Consequently, the zipper teeth leaked water when the going got wet. Worse yet, the side zippers consistently caught the nylon fabric when zipped up or down, causing frequent jams. The obvious cure is to isolate the metal zipper teeth from the nylon and put in a one-piece flap to hold out the water. The lack of this treatment was our only real complaint with the pants.

Jams aside, however, the full-length side zippers not only make it easy to get into and out of the suit, but have jumbo-size zipper-pulls so you easily can grasp them while wearing bulky winter gloves. Attention was paid to the jacket's two-way zipper, too, using the same large pull for the top runner. The bottom runner has a smaller pull so it tucks under the flap, where it is less likely to scratch your gas tank's finish.

After you've zipped up the jacket, you pull the adjustable waist belt tight so the suit doesn't flap crazily while riding. It has a nylon male/female press-fit buckle. The belt itself is made of webbed nylon, similar to material tie-downs are made of, and didn't twist out of shape once during our evaluation.

In-suit storage space won't be a problem with the Tour Master, thanks to the three patch-type pockets in front. If you haven't noticed, the chest pocket is on the *right* side, so you can reach into it with your left hand while riding and not take your right hand off the throttle grip. All three pockets have flaps secured by Velcro, and the torso pockets are deep enough to hold a check book and wallet. The jacket and suit also both feature slash pockets to serve as hand-warmers when you're not riding.

While the suit works well against the cold, it doesn't hold up when presented with higher temperatures. One of our testers brushed against a Yamaha XS850's warmed muffler, and quickly burned a hole the size of a half-dollar at the ankle of one of the suits.

Discounting this type of melt-down mishap, Helmet House puts a full-year warranty on the workmanship and materials of its cold-weather gear. The apparel is available in black and silver, and there's a 1½-inch-wide reflective two-tone blue stripe along the back and the sleeves. But most important of all, the suits are warm and reasonably weather-proof. To make it a better foul-weather suit, Tour Master should de-Velcro the jacket by about 20 percent, and fix the pants' side zippers. That would suit this year-round rider just fine.

—Dain Gingerelli

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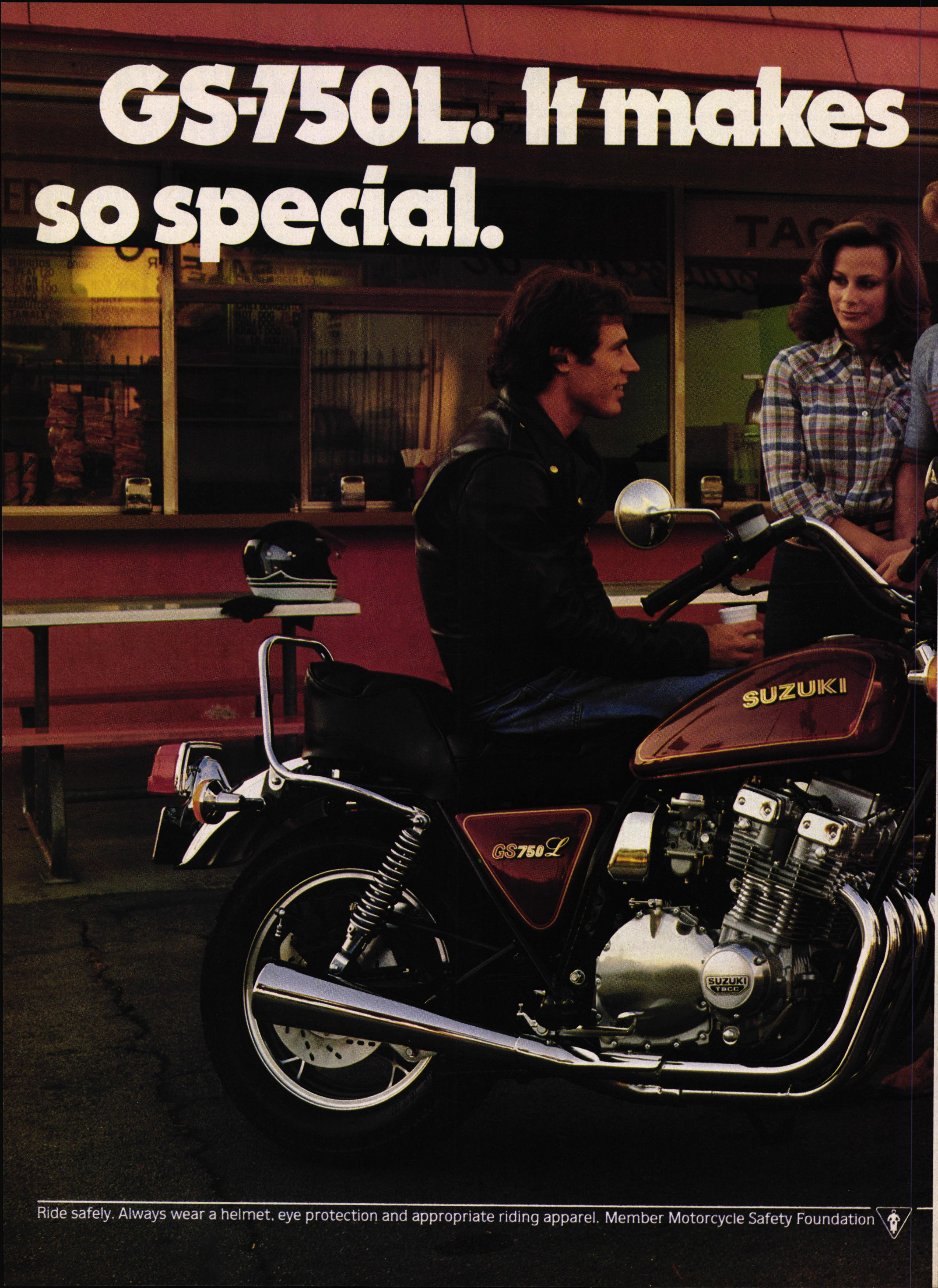
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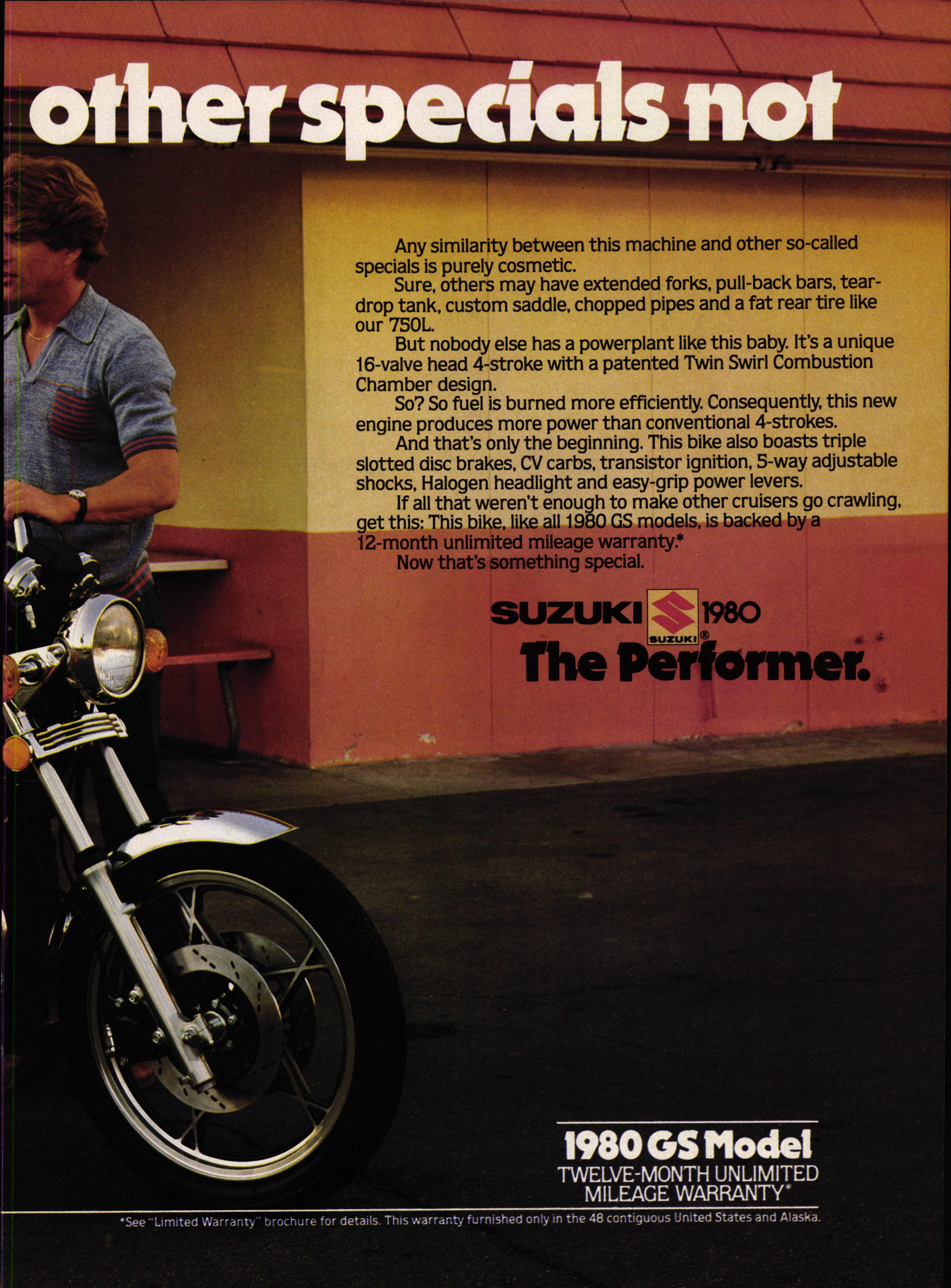

other specials not

Any similarity between this machine and other so-called specials is purely cosmetic.

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But nobody else has a powerplant like this baby. It's a unique 16-valve head 4-stroke with a patented Twin Swirl Combustion Chamber design.

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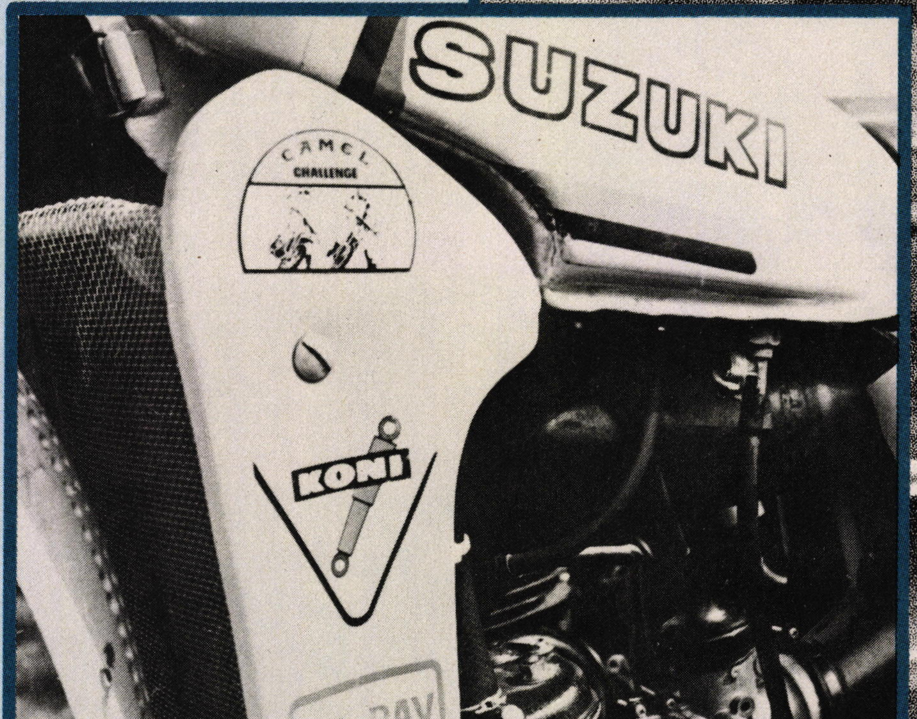
ANTI-FREEZE FUTURES:

Hot And Cold Running Motocrossers

The path to victory lane in 125 MX these days is paved with water pumps, radiators and empty jugs of Prestone. BY DAVID DEWHURST

PHOTOGRAPHY: JACK BURNICLE



Small-bore motocross is getting very fashion-conscious these days. If you do not wear a jacket you may not be admitted. You won't be shunned for lack of a tweed or a worsted, but without a water jacket you may as well stay at home. That's water jacket as in a water-cooled cylinder, of course.

Water cooling has become the No. 1 priority in 125cc motocross of late, as Harry Everts demonstrated in winning the 1979 World Championship. From the first practice session of the season, he and teammate Akira Watanabe walked away from the opposition on brand new Suzuki water-pumpers. Not only were the bikes fast, they were also unbelievably reliable, and both riders monopolized the winner's garland week after week.

Suzuki was not the first and certainly won't be the last to build water-cooled motocrossers. With the dropping of the claiming rule by the AMA, any marque that hopes to co-exist on the victory podium with Suzuki, including Yamaha, the perennial 125 national champion, is going to have to wear jackets.

This sudden mad rush for liquid cooling comes as a result of the ever-increasing power being squeezed from the micro-motocrossers. More power means increased heat which, in turn, leads to distortion, wear and eventual mechanical failure, not to mention a loss of power by moto's end.

Just how much heat is involved here can be a little unnerving. Only 30-35 percent of the total heat produced in an engine is converted into mechanical work by the crankshaft. About 35 to 40 percent of it blows straight out the exhaust, and more importantly, approximately 30 percent is transmitted to the cylinder head and barrel.

Obviously, any power increase means a proportional increase in temperatures everywhere, and because of the two-stroke's design, these increases can be very

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SCOTT
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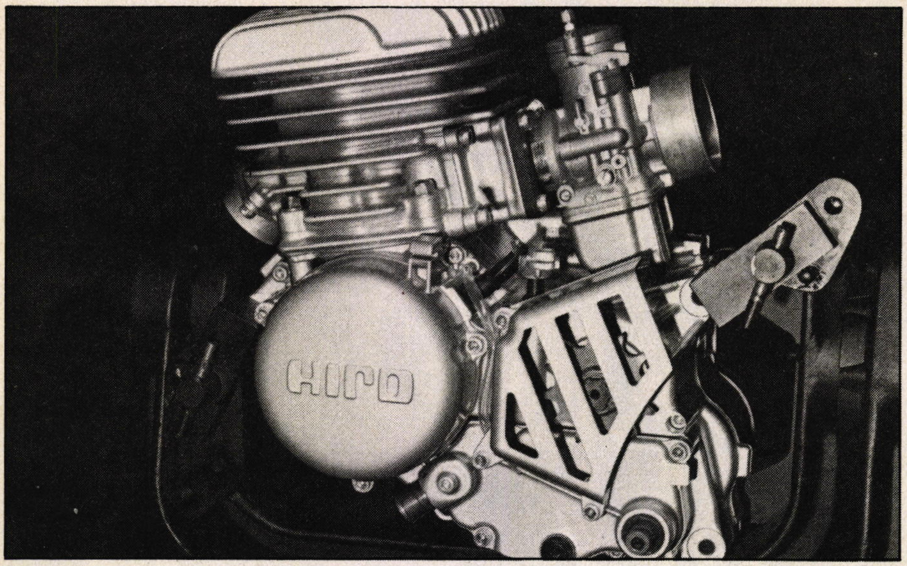
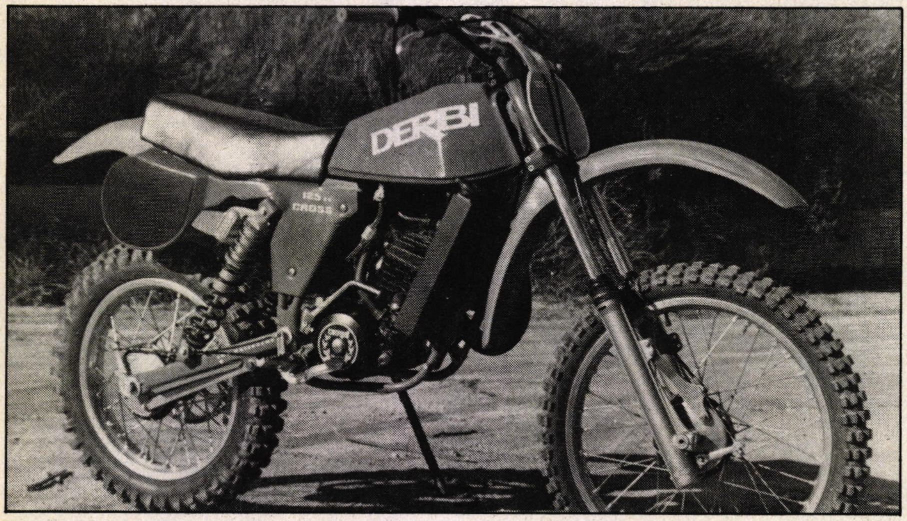
SUZUKI



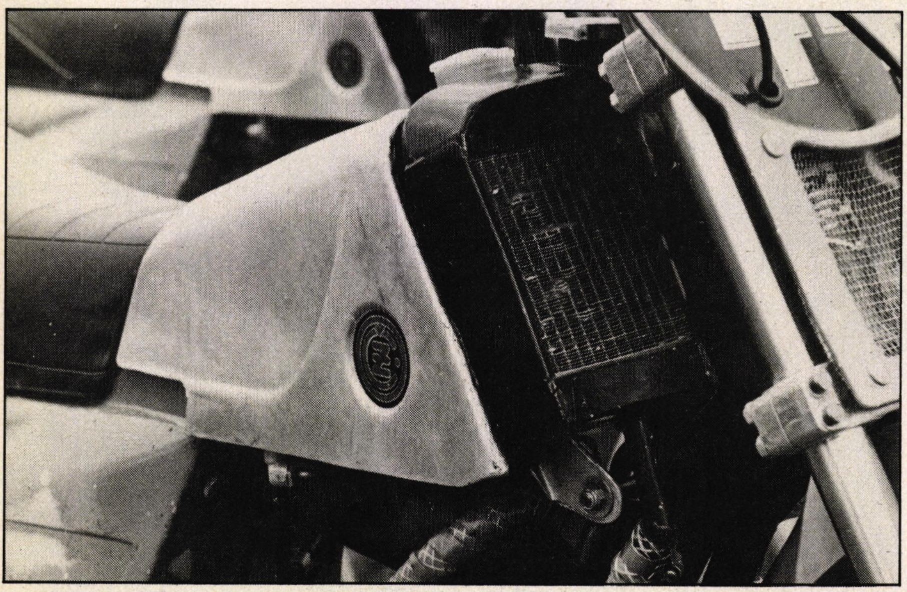
Production Hiro engine with gearbox-driven water pump

Cooling the crankcases, barrel and head for $30 more than an air-cooled engine.



Derbi 125 with Aspes engine takes the obvious approach to water cooling

But does one motocross bike plus one radiator add up to a winner?



1978 CZ kicked off the current trend to water cooling

A two-piece radiator straddles the steering head in front of the gas tank.

high. Unlike the four-stroke, which has a non-productive cycle wherein the incoming charge cools the motor, the two-stroke contains hot gases nearly all the time. With combustion occurring every revolution, the two-stroke can attain temperatures that are 70 percent higher than those experienced by a four-stroke.

Unfortunately, this heat is not distributed evenly throughout the motor. Eighty percent of the heat lost to the engine structure must be dissipated by the cylinder head. And the bulk of the remaining 20 percent in the cylinder is concentrated around the exhaust port. Combine all of this with a cylinder that is riddled with irregularly shaped holes, and it's easy to see how metal distortion can become a major problem.

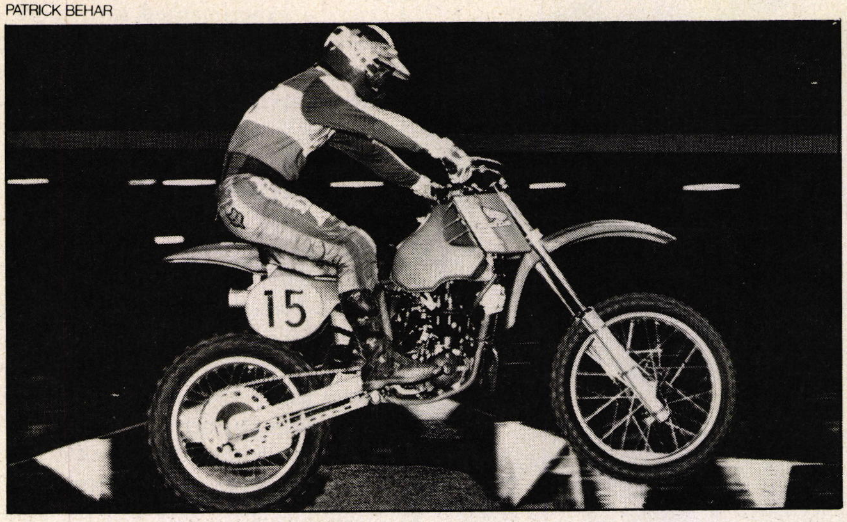
Air cooling has proven adequate for most needs until recently, but the one-two-fives have become borderline cases, especially the works-exotic factory 125s. They've been forced to pump out as much as 50 percent more power than a few years ago, while their forward speed (and, therefore the effective speed of the cooling air) has not increased proportionately. This is why water cooling has proven invaluable—it provides a differential in cooling action to help reduce distortion in parts heated to wildly differing temperatures. While an airstream provides a uniform cooling effect, water-jacketing can be configured so that the cooling liquid is carefully channeled to areas which need it the most.

It is not surprising, therefore, that cool water from the radiator is almost always fed first into the cylinder head. From there it usually is drawn by a gear-driven pump down the front of the barrel, past the hot exhaust port. The rear of the barrel, which gets cooled by the incoming charge in the inlet port, needs less help from the cooling water. Likewise, the sides of the barrel, which are cooled by the fuel charge in the transfer ports, need a lesser flow of liquid.

All of this selective cooling means that the head, barrel and crankcases expand in a far more even and orderly fashion, resulting in considerably less distortion. It is then possible to reduce considerably the tolerances between the piston and barrel to give a much-improved gas seal. And that ultimately leads to less power loss in the waning moments of a 40-minute moto.

Judging by its GP track record, Suzuki obviously has learned the benefits of a better gas seal. Less blow-by past the piston means more horsepower at the crank, and Suzuki certainly had more of that this past year than anyone else. A horsepower advantage also comes from the more-radical tuning made possible by water cooling.

PATRICK BEHAR



Honda's amazing water-cooled 250 at Anaheim stadiumcross

Twin water pumps, temperature gauge and a radiator aft of the steering head.

Sport View

• The curious thing about water-cooled motocross bikes for 1980 AMA racing is the fact that it's hard to find anyone who's actually in favor of the things. The whole discussion began when the claiming rule was suspended last season, protecting the factorys' technology from the occasional fat wallet among the privateer crowd. But once the gloves were taken off, the specter of water cooling raised its head for the first time since 1975 when Yamaha competed with a water-cooled 125cc MX bike. And now the situation seems to be careening out of control—as the following list of comments by ranking motocross heavies indicates.

• **Mike DiPrete, AMA Director of Professional Racing: "The riders asked for the change; they wanted us to allow them to race things like water-cooled engines. So far, water-cooled motorcycles have not proven to be better on the racetrack than air-cooled ones. . . . I think it will be an advantage only psychologically for the rider—there's little chance it will change the shape of racing much because factory riders are bound to win no matter what. That's why they're factory riders."**

• Ken Clark, Yamaha Racing Department Manager: "I think this is totally unnecessary. I am not in favor of the water-cooled engine unless it is already on a production motorcycle. All this is going to do is increase the cost of racing for the privateer. Plus, we [Yamaha] were not scheduled to have any water-cooled engines on racetracks for 1980. And because the other companies are going to have their bikes equipped with water-cooled engines, we are going to have to do the same to keep on racing and winning.

"Actually, the same thing goes for the fact that you can now use titanium. None of our bikes had exotic metals before. All I can say is that the privateer is going to have to pay for all that expensive equipment—and that's not right."

• Gunnar Lindstrom, Honda Racing Department: "I have always allowed, even back in '75 when Yamaha had its water-cooled kit for the YZ125 (which was in fact never prohibited; only the claiming rule changed things), that water-cooled engines are the way of the future. In fact, I think it would be a mistake not to use them on motocross bikes. Of course, on the other hand it brings new problems, like it's more complicated and will require better knowledge as far as maintenance.

"But I am glad the AMA had the right attitude. The way we [Honda] are going to work this out, is in the first step trying water cooling out on the works bikes and seeing how it performs. And if it really has an advantage, it will be a production motorcycle. We will look into the problem in the 125 class and in the 250 class."

• Mark Blackwell, Suzuki Racing Manager: "Basically, I am against it because we race for sales promotion and product development. We put into production what we have raced the year before. Nowadays, we don't have time for a third- or fourth-generation prototype. If you want to stay on top, you have to produce what you race.

"And as for the water-cooled engine, we think in a production bike it is going to be more complicated and more expensive to maintain for our customers—some of them these days do not know even how to adjust a chain! Of course we are going to try it, probably on the 125, but if it isn't better we may run an air-cooled engine anyway.

"So we're going to try the water-cooled engine first, and if our customers want the water-cooled engine, we will be able to help them—but like I said, only after we've tested it. Actually, the mechanics think they're trick, but the ones who saw the watercoolers at Mid-Ohio aren't so impressed after they saw how much work they took . . . Also if we run watercoolers everyone will scream about how unfair it is to the privateers and that might bring back the claiming rule, which I don't believe is good for the sport."

• Chuck Larsen, Kawasaki Vice-President of Sales: "I think all that is going to happen is that the cost of racing will increase. And that's unfortunate, because the other manufacturers are going to include water cooling in their production bikes, and that will raise the price of motorcycles.

"Like I said, it's unfortunate. We have had pretty good racing so far without water-cooled engines. As far as we [Kawasaki] are concerned, we do not have any plans as far as next season is concerned. We are going to investigate the matter and if water cooling is significantly better, we will incorporate it on our motorcycles. But I don't know yet."

• Nils Arne-Nilsson, Husqvarna Racing and Product Manager: "I am against anything that will increase the cost of racing for the privateer or amateur. I'm not sure a water-cooled engine is better, and by the same token I am not in favor of any use of exotic materials on the bikes, again because it will increase the cost for the non-factory rider.

"What I am in favor of is a ruling that will make racing more competitive and profitable for the privateer. I think it's wrong to have bikes for the factory riders that are so much better than the stock ones available to the public."

• Selvaraj Narayana, Maico: "We don't think it's necessary for us to add water cooling to our engines, at least not now. It's a complicated system and because we don't notice any loss of power after a 40-minute moto on our bikes, we don't feel it's necessary to add it.

"Still, we are working on it and in the future if it shows that we have to have water cooling to stay competitive with the other teams, then we'll add it. Maybe for the Supercross series, where the effort is short and the need for horsepower great."

• Warren Reid, Kawasaki factory rider: "The ones at Mid-Ohio didn't seem so fast to me and I don't think they're worth it. I was riding a stock KX250 at the Anaheim Stadiumcross and it was faster than Sun's (Honda) watercooler."

• Jeff Ward, Kawasaki factory rider: "Everts and Watanabe had watercoolers at the 125 USGP but Myerscough ran right with them on an air-cooled bike and didn't seem to get any slower at the end of the race. I guess they're supposed to keep the bike from getting hot—but I've never seen any bikes overheat." —*Patrick Behar*

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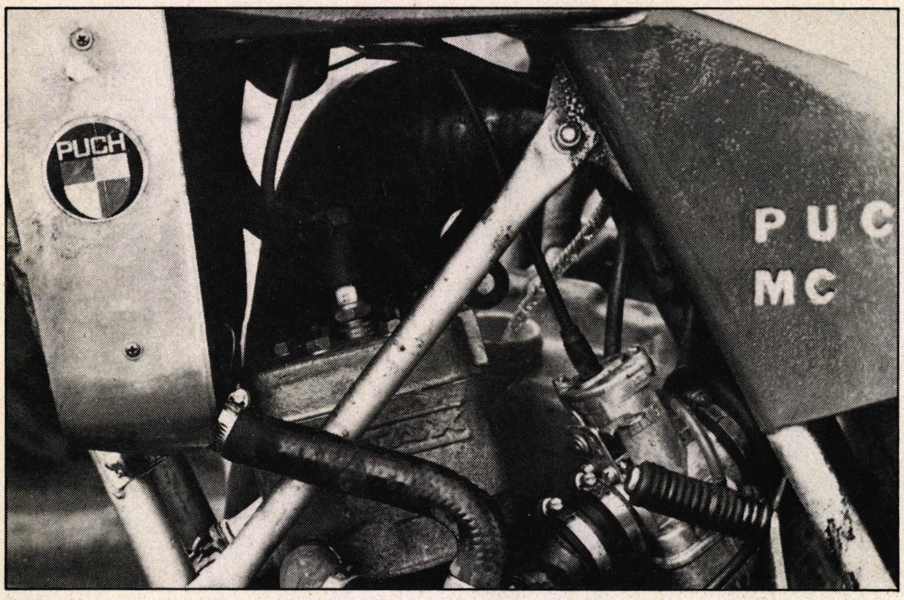
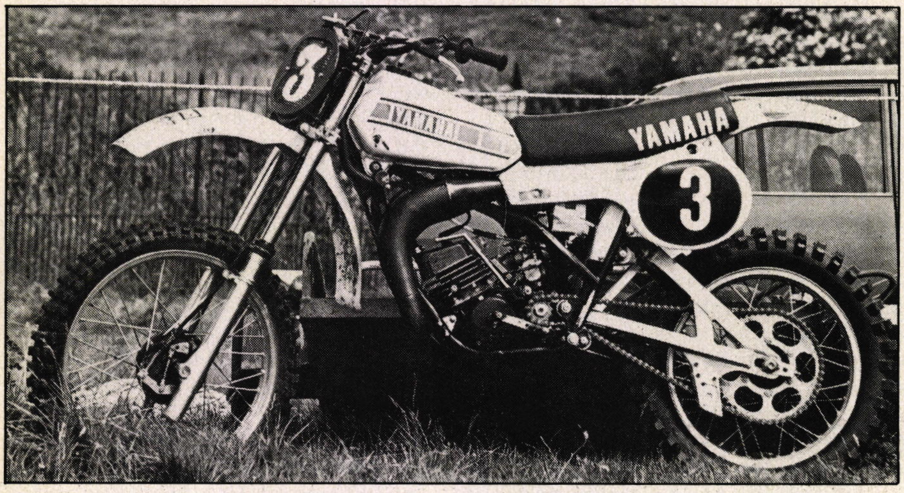


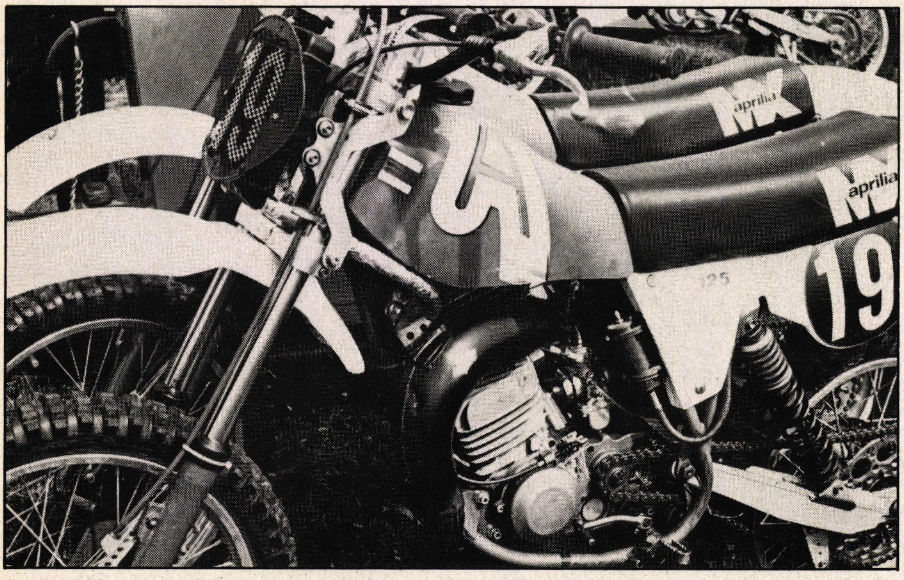
1978 Rotax-powered Puch with bolt-on water cooling

Radiator hardware aided roadracing engine's longevity, but added complexity.



Gaston Rahier's Yamaha 125, the only bike to stay close to the Suzukis

Changing from 1975's thermo-siphon cooling to a waterpumper.



Aprilla 125 with Andrea Mosconi's Hiro engine, favorite of Italian constructors

Racer had primary gear-driven water pump, water-cooled barrel and head.

With less distortion, port shapes and sizes can be experimented with more freely without fear of distortion-related seizures. Compression ratios also can be increased, for the extra heat produced by this change can be easily handled by the cooling system.

Despite its obvious advantages, though, liquid cooling brings with it many shortcomings that have curtailed its use in the past. The first and most obvious is increased weight. A radiator, a water pump, several quarts of cooling water and more-complex engine castings will all help to bend the needle on your bathroom scale. The recently increased FIM minimum-weight ruling and the use of exotic materials should ensure that most factory machines, at least, stay near the legal limit, but this leads to the second disadvantage: price. Intricate radiators and complex engine castings cost money, and while the factory teams do not worry, many fear that the major manufacturers will be forced to produce expensive water-cooled showroom models to remain competitive in the general market.

If everyone does jump on the liquid-cooled production bandwagon, we can look for a real styling battle to ensue, centered around the location of the radiator. Yamaha started it all with a radiator behind a screen-like front number plate. And while this is thermally efficient, it requires lengthy plumbing and adds considerable weight where it can do the most harm, on the steering mechanism. Suzuki, meanwhile, opted for a larger radiator on the front downtube. And although that system is less efficient because the flow of air is partially obstructed by the front wheel and fender, it is simpler to mount.

CZ's answer was to mount twin radiators in the front of the gas tank just behind the steering head. Similarly, Honda is now using Mickey Mouse ears on the gas tank to duct air to a radiator that's positioned in front of the fuel tank on the RC250 machines, while the RC125 racers are using a horizontally mounted radiator hidden almost under the gas tank.

Moreover, bolt-on water-cooling kits already are available from many firms and it cannot be long before the first production water-pumper rolls onto the showroom floor. Chances are that it will be a 125, but Honda's interest in 250s may indicate the path of future development.

For the time being, the Open-class machine with relatively mild tuning is safe from the water pump. In the smaller classes, though, dress is strictly formal. Ties are optional, but jackets are mandatory. ●

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To achieve the rich lustre of our black chrome and to keep the muffler from discoloring at normal operating temperatures, we developed a costly four-step plating process. The final step is oil polishing, again by hand, for a deeper, richer, blacker black.

From the black of the engine to the deep, glossy, triple-baked black that graces the tank, fenders, and side covers, a Midnight Special's finish is, quite simply, a labor of love.

What isn't menacingly black is meticulously gold. Gold gas cap, etched name plate, grab rail, and a pair of gold one-piece alloy wheels. Beautiful, durable gold plating that looks like the real thing because we used 24k gold as the standard.

The XS Eleven Midnight Special boasts a four-cylinder powerplant that's the biggest we've ever put in a production machine. The XS850 Midnight Special sports our awesome triple. And both offer the turbine-like propulsion of shaft drive.

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PRODUCT EVALUATION:

Shutterpack Camera Gear

The case is closed. And maybe it floats.

• It just might be that your Ultimate Experience is grinding away your footpegs in a Kenny Roberts-inspired run down Lombard Street in San Francisco. Or perhaps it lies in busting berms all day on a 500cc monoshocker with 20 inches of wheel travel. But if you ride motorcycles and take pictures, get practical; put away your fantasies and listen up.

You already know that you don't want to bungie your black box full of diodes and high-priced optical glass to the back of your bike like yesterday's tuna sandwich. Besides, probably you have other stuff like lenses, strobes and motor drives to pack along. What do you do with them? Do you strap on your foam-lined, million-dollar metal camera case and ride with the gas cap nestled snugly between your thighs? Or haul out the old day pack and toss everything in, hoping that it all comes out in the same condition?

If you've faced the age-old question of how to take it with you and still have it end up in working order, Ultimate Experience, Inc. might have the answer. Among its line of backpacking-inspired photo gear are some trappings that could make your motorcycle/photo experience a little more satisfying, if perhaps not the Ultimate.

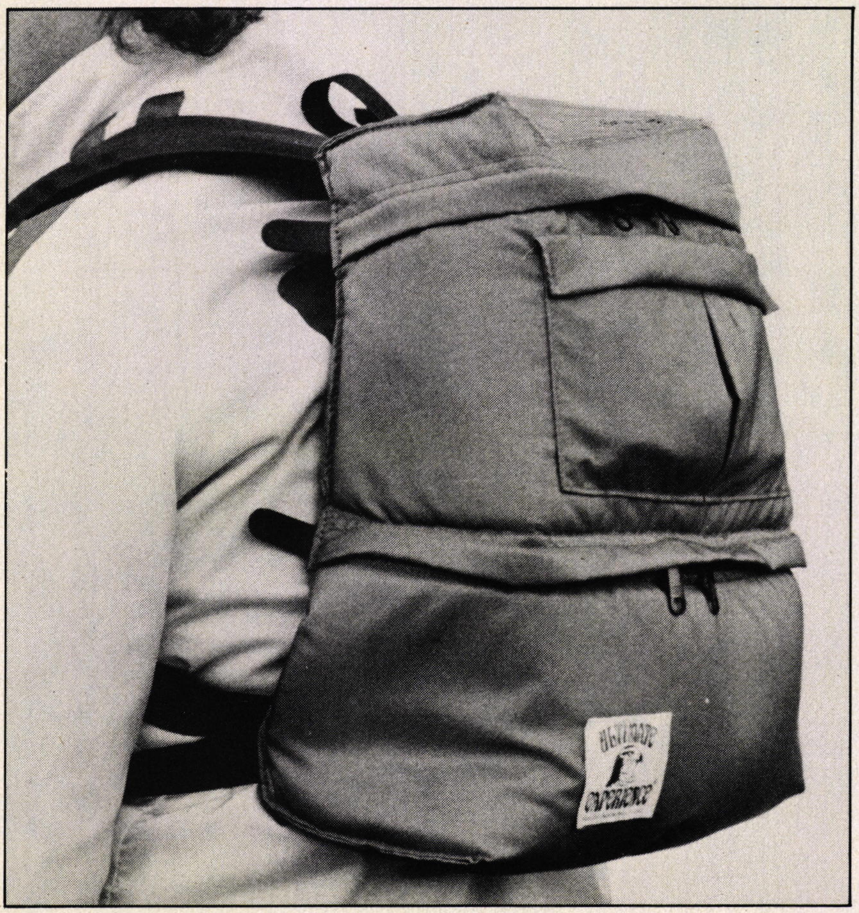
To test the gear, the *Cycle Guide* staff and some of its photo contributors studied UE, Inc.'s catalog and ordered up a few items we thought would be suited to the motorcycling f/stop's needs.

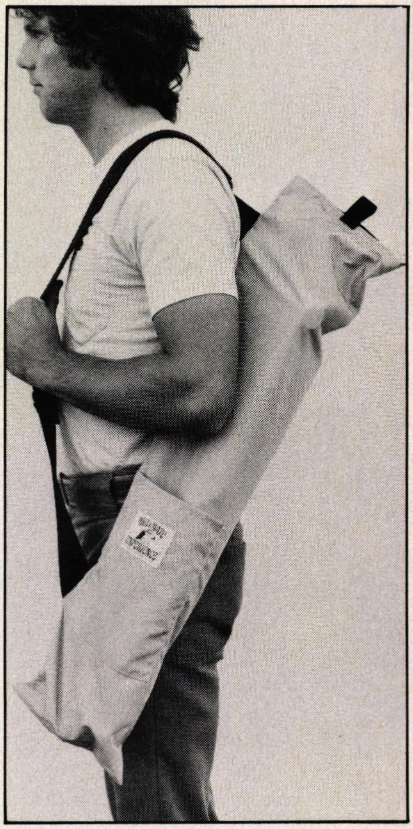
Anticipation. Waiting. Finally the delivery man bounded into the office like a brown-suited Santa—tripod case, six-inch lens pouch and photographer's vest in hand. But the most promising piece he carried was a Sundawn Pack, one of four Shutterpack Cases in the Ultimate Experience line of photo paraphernalia.

In all its electric blue, foam-padded glory, our Sundawn Shutterpack looked more like an overstuffed parlor couch than a gadget bag. It also looked like it wouldn't hold much. Two camera bodies, three lenses, two bulky light meters, one sizable strobe and several filters later found us looking for still more gear to stuff inside.

Combining back packs and motorcycling certainly is nothing new, but the Shutterpack line does add a few interesting wrinkles. The Sundawn model has two separate zippered layers, each divided into several compartments. Foam padding abounds throughout. So much foam, in fact, that the packs are advertised as being able to float—even when filled with equipment (up to 30 pounds in the Sundawn). Unfortunately, we could find no volunteers for wet-testing the pack—something about the Sundawn being water resistant but not water*proof*.

But while the case might not hold back monsoon-quantity water, it *is* handy. Each compartment is closed with a double zipper so you can open either section from either





Hand-freeing tripod case

The over-the-shoulder look is in.

side, meaning that you have access to your zoom lens without having to worry about mixing your exposed film in with the unused stuff. In use, we found the Sundawn more receptive to different combinations of cameras, lenses, accessories and tools than any other fixed-compartment bag we've ever used. Padded shoulder straps, a quick-release waist strap and an outside flap pocket complete the Sundawn's features. It can be had in blue or beige for $49.95.

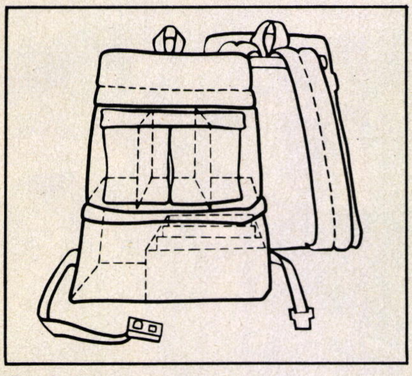
Perhaps the most useful of the other photographic side-orders we tested is a lens case that UE, Inc. calls a Pic Pouch. We sampled the six-inch size, but the pouches also are available in 4-, 8.5-, 12.5- and 16-inch lengths. All of them are padded with half-inch foam, are four inches in diameter and close with a locking drawstring top or zippered side (depending on the size). The six-inch bags will contain an above-average-size 135mm lens with no problem. All the Pic Pouches have leather patches on the side so you can attach them to something with a belt or strap. The pouches are snug and seem perfect as one extra measure of lens protection. The six-inch size retails for $11.95 and comes in beige or blue. Prices on the other size Pic Pouches range from $8.95 to $17.95.

A photo vest is a photo vest is a photo vest. The vest from UE, Inc. simply is a standard-issue version with a retail price of $32.95. It has four pleated, Velcro-closing pockets and two elastic bandito straps to hold film cans. If looking like the Michelin man and having your equipment bang around inside big pockets is your idea of photo convenience, all well and good. This vest will do it as well as the others—it just will cost more.

The last piece of equipment we tested, the tripod case, seemed like a novel idea and not a bad one either. The case is especially useful for traveling because in addition to protection, its adjustable strap frees your hands for carrying other things. We found the available 32- and 22-inch sizes don't seem to correspond with the tripods around here, which might just be our problem, but you probably should measure your tripod before you order a case. The price is $16.95 for either size.

There are more items in UE, Inc.'s catalog that look useful, and you can get a copy of the Ultimate wish-book by writing to Ultimate Experience, Inc., Dept. CG, 711 West 17th Street, Costa Mesa, California 92627. The same items also are available through some photo and sporting goods stores. Arriving with your camera unbroken and gear intact might not be your particular idea of the Ultimate, but it's not bad.

—David Clark

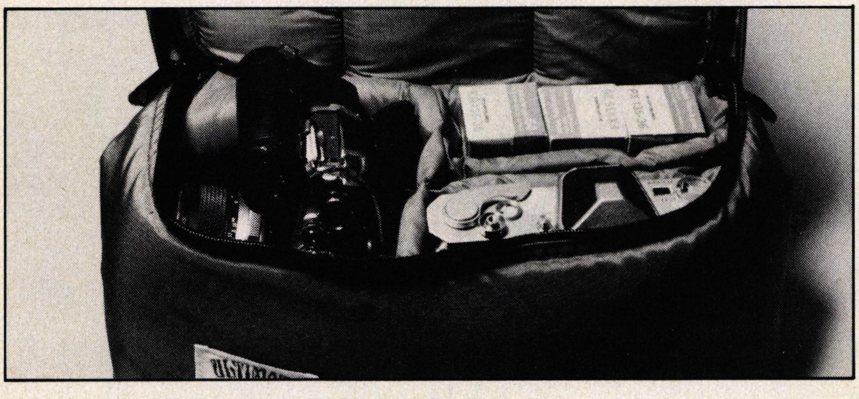


Sundawn cutaway

What the airport x-ray sees.

Pic Pouch with locking drawstring

It's not soap, but it floats.



Cavernous lower compartment of the Sundawn

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The KX250 and the KX420 are equally exciting, and all have Uni-Trak suspension. All three are built to keep the weight down. Chrome-moly frames, aluminum box-section swingarm, plastic fenders and fuel tanks.

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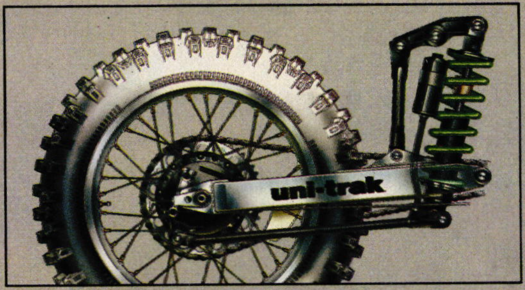
Then there's the Uni-Trak. This single-shock rear suspension is revolutionary. It really puts the power to the ground and that makes for better acceleration and better stability. Uni-Trak keeps the center of gravity low and under

KX
Kawasaki
125



the rider so you don't get that "lead in the gas tank" feeling. Since it's a single shock, you never have to worry about uneven damping. Both spring preload and compression damping are adjustable. When you combine Uni-Trak with adjustable air-spring front forks, you get the winningest suspension on the market.

Sure Brad Lackey likes the color green. Remember what he said: If you ain't got the greens, you're gonna get the blues.

Check out the green meanies at your local Kawasaki dealership. Then go out and win.

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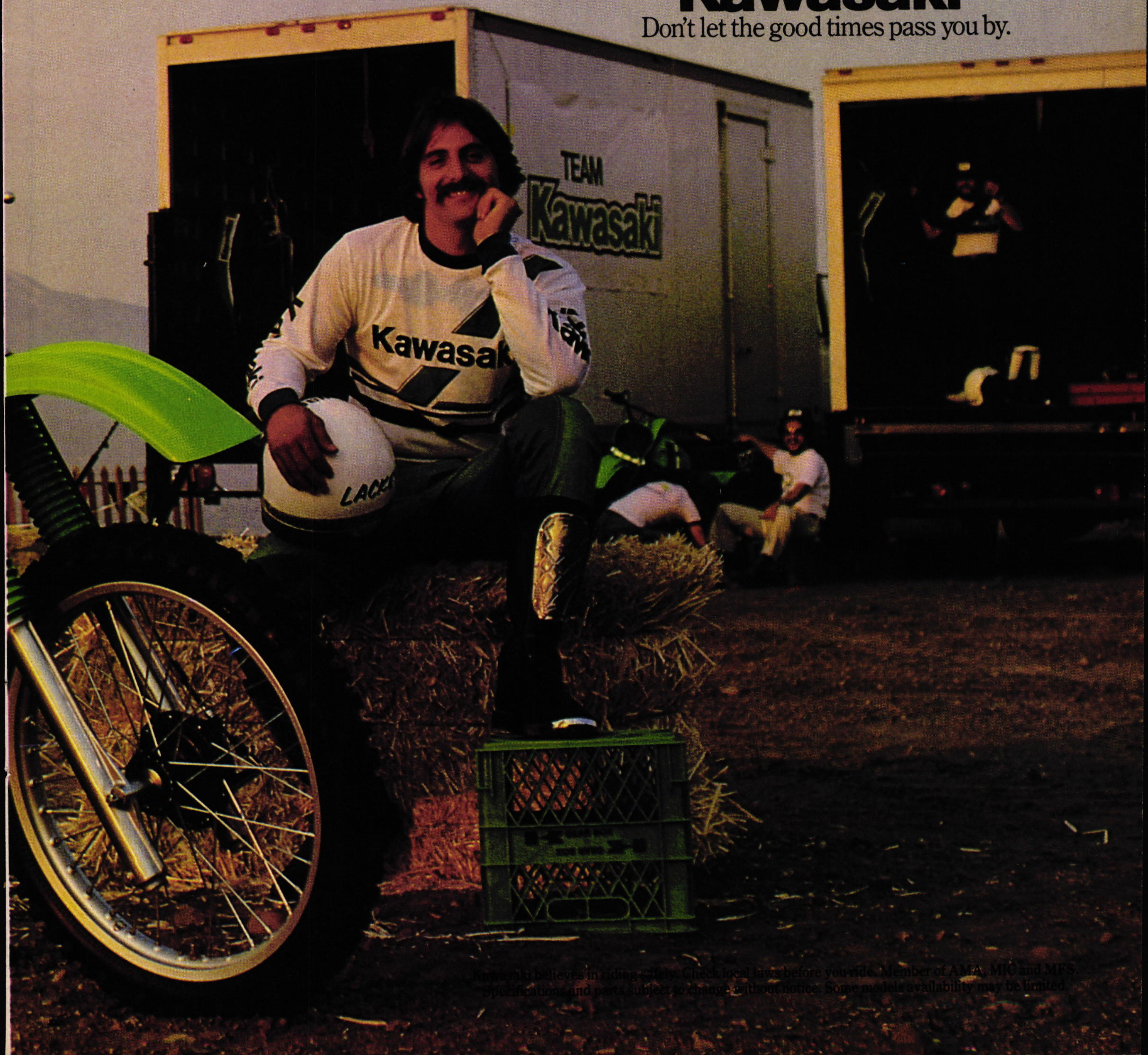

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SWARUP—A proven modern Japanese product, based on computer science technology, will add 10–20% to your fuel power! How? SWARUP improves your engine performance by swirling the mixture of gas and air in your engine and increasing the speed of this mixture flow. This means greater fuel economy, increased power . . . , and increased torque for you!

Single Carb	$28.95
Twin Carb	$38.95
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SEKON

SEKON INTERNATIONAL

SEKON INT'L CORP. OF AMERICA
2210 Wilshire Blvd. Suite 577 CG
Santa Monica, CA 90403 (213) 393-9791

Do you know that while a smooth bore carburetor and the SWARUP both increase the power of your bike, a smooth bore carburetor increases fuel consumption and the SWARUP decreases it?

Do you know that while using the Swarup, if you step up the main jet as a smooth bore carburetor does, not only will you have more power than a smooth bore carburetor, but you still will be consuming the same fuel as the stock carb?

Do you know that the smooth bore carburetor costs nearly $300 for a four cylinder motorcycle, while the SWARUP is less than one quarter of the price? You figure it out.

Do you know that we are selling more SWARUPs than smooth bore carburetors in the Japanese after market? (By the way, you are aware of who makes the bikes?)

We do not disagree with the function of a smooth bore carburetor, we've just found a better and easier way!

A Glimpse of the Future

SWARUP®

We Challenge Smooth Bore Carburetors for Power!

The SWARUP is the best cost-performance device on the market today and is the only device which is capable of burning a wide range of air-fuel mixture in your engine. This gives you a wider play between power and fuel consumption!

By simple installation of the SWARUP, you get an increase of more than 10% in power with better fuel economy. A further increase in power can be made by stepping up the main jet. If you step down the main jet, a leaner air-fuel mixture for better fuel economy can be obtained while maintaining stock power. Again, the SWARUP is the only device to give you this wide range burning.

When you install a high cam shaft, a big bore, or a low resistant air-filter, usually you will have a hard time getting a good setting of your carburetor. Because of the excellent performance of SWARUP, a smooth setting will be very simple, even if you are not a professional in installing high performance products.

Finally, the E.P.A. standard for all 1980 models will decrease their performance. The SWARUP can burn an even leaner air-fuel mixture than that required standard. That means that it can increase the performance for the latest and future models or even any racer that you build. The SWARUP — A Glimpse of the Future!

SWARUP
39
Smooth Bore
791
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Single Carb	$28.95
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TR3 BIKE GLAZE.™ IT KEEPS UP YOUR TOTAL IMAGE.

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TR-3 Bike Glaze – the new concept in motorcycle care.

TR3 TR-3 CHEMICAL CORPORATION
330 W. TAFT AVE./ORANGE, CA. 92667 (714) 632-5000

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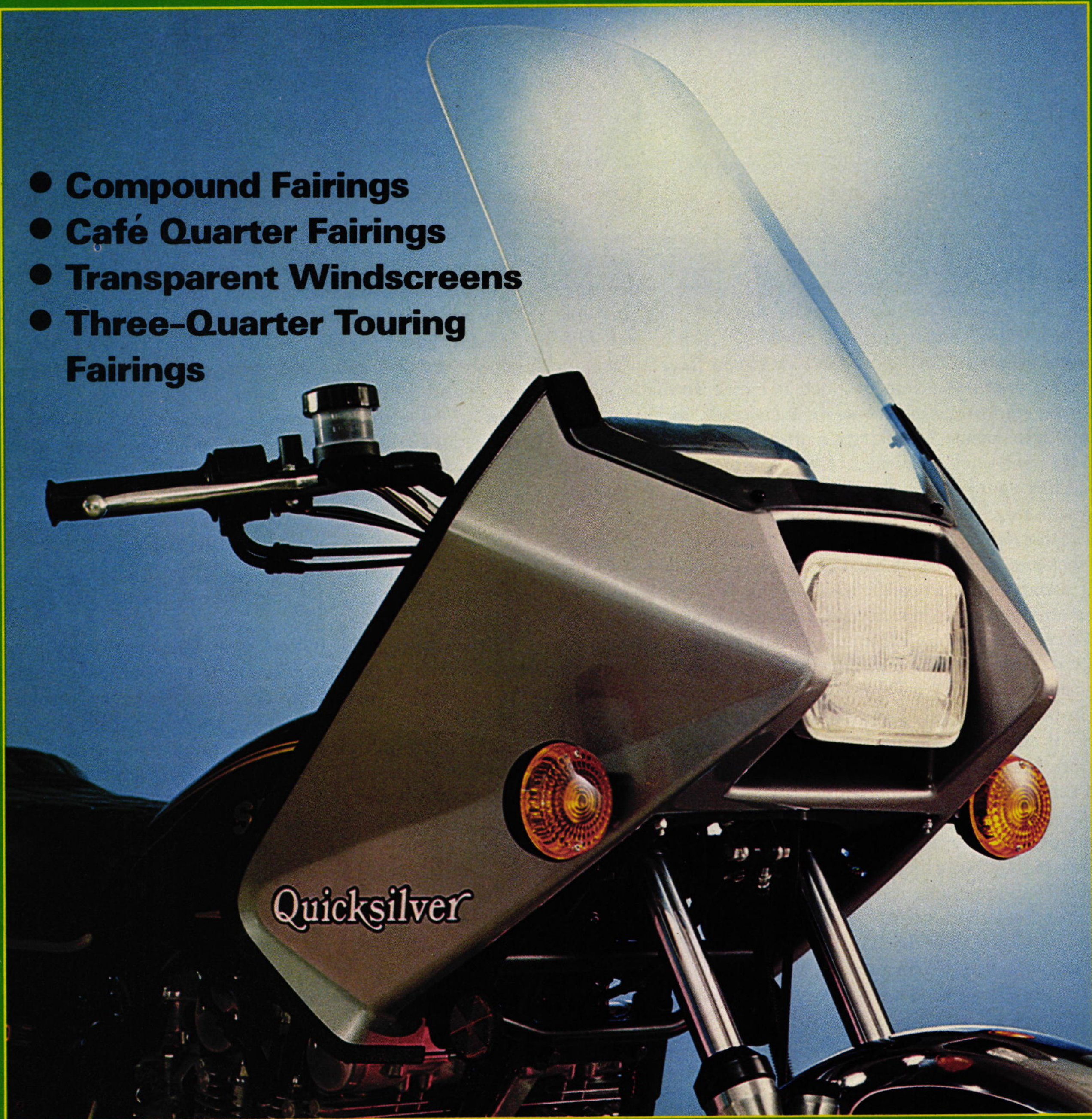
Cycle Guide's

SPECIAL EDITION

Complete Fairing Buyer's Guide

- Compound Fairings
- Café Quarter Fairings
- Transparent Windscreens
- Three-Quarter Touring Fairings



A definitive guide to wind cheaters: who makes them, what they fit, how they're made and what they cost.

Fairings play two important roles in motorcycling: They offer more protection from the elements than anything short of a door-slammer; and they provide, in their larger configurations, at least, a host of new and unused surfaces suitable for mounting rider accoutrements such as radios, speakers, gauges and extra storage compartments. In many cases, fairings also can improve gas mileage by poking a more efficient hole in the wind. And if there's one quick way to alter or reinforce the image you would like your motorcycle to project, it's to bolt on the right kind of fairing.

Not that fairings are without their drawbacks. Even though the ones that mount to the handlebars usually are light in weight, their aerodynamic properties can play havoc with the steering and stability of some motorcycles. Heavier fairings generally attach directly to the bike's frame, but their aerodynamics also can affect stability, and the considerable weight they place directly over the front wheel (upwards of 50 pounds in some fully outfitted instances) not only gives the whole motorcycle a different "feel," it can prove too much for the stock front suspension to support. Frame-mount fairings also don't let the headlight turn with the front end, so you often have to grope blindly around a tight, dark corner while the weeds off at the side of the road are luminous with quartz-halogen light. And all fairings, regardless of their point of attachment, catch a lot of the engine's clicking, whirring and humming, and funnel it right up into your face.

Fortunately, those negative aspects tend to be overshadowed by the positive ones in the eyes of those who are enthused about life behind a fairing. A long-distance trekker, for example, cares not one iota that his bike can't be an effective back-road pipe-dragger because of its huge, heavy fairing; all he knows is that he's warmer, drier and more entertained during his Interstate travels because of the fairing and everything that's attached to it. And sport riders—people who *are* concerned with handling—usually are knowledgeable enough to know which type of handlebar-mount fairing will penetrate the wind without fouling up their bike's racer-like cornering.

So selecting the right fairing is a matter of proper application and calculated compromise. You can't expect to get the protection and carrying capacity of a big touring fairing and the superior wind-penetration of roadrace-sleek bodywork all in one. At least not with existing technology. Maybe the fairing of the future will be able to excel at both of those extremes, but today's offerings simply cannot.

So as long as you don't get too idealistic, there's a fairing to suit most every taste and need. Fairings are made in all shapes, sizes, styles and colors, most of handlaid fiberglass, some of molded ABS acrylic and others of rotational-molded polyethylene. But while there are subtle advantages and disadvantages of one construction methodology versus the other, the important thing is to buy a fairing that has the look and the features you want, for nothing in its material makeup will be able to compensate for the lack of them. That's why fairings are like motorcycles: The best one for you is the one you *like* the best. If that critical need isn't met right up front, no fairing/rider relationship stands a fighting chance.

The biggest problem, then, is in sifting through all the available choices to find your One True Fairing. Which is no small undertaking when you consider the dozens upon dozens of models on the market. That's where we come in. We've assembled facts, figures and photos on (we think) every model of fairing currently for sale in this country, and we've further broken that information down into specific categories to make your shopping even simpler. But first you have to understand the various categories that fairings fall into and be aware of the type of riding they're best-suited to perform.

Basically, there are three types of fairings: those that mount to the handlebars, those that mount to the frame and compound fairings, which do both. Handlebar-mount and frame-mount fairings each come in various styles which are determined either by the amount of coverage they provide and/or their particular riding application. Each type and style usually is at least adequate for its chosen usage, but at the expense of some other important considerations. So shop wisely.

HANDLEBAR-MOUNT FAIRINGS

As the name implies, every fairing in this category attaches either to the handlebar or to something that turns with the bar (headlight brackets, fork triple clamp, etc.). That has its pluses, which are simplicity of mounting, ability to fit almost any motorcycle and a headlight that will point where the front end is aimed. A small fairing will allow the best handling, simply because putting any large, heavy device on the handlebar can cause too many steering and stability problems. Small fairings don't offer much shelter, however, so if long-distance riding protection is your target, look into a frame-mounted touring fairing.

Quarter Fairings are the small types such as those used on the BMW R100S, the Suzuki GS1000S and the Kawasaki Z1-R, as well as on other so-called "cafe racers." These usually are the most inexpensive fairings and offer a minimum of protection (usually none at all for the hands) but a maximum of racy looks. Most of these retain the stock headlight location, but the majority require a switch to clubman, clip-on or other low-rise handlebars.

Touring Fairings offer greater protection by being taller than quarter fairings and wider, as well. And the windscreen usually is less curved and more vertical. But the various styles of mounting are about the same, and neither the weight nor the price is as high as that of their frame-mount counterparts. Because they generally are lightweight but afford reasonable protection, handlebar-mount touring fairings are a popular choice for smaller-displacement machines.

Transparent Fairings are similar to touring fairings except that they're made completely of clear acrylic. That offers the rider an unobstructed view, both of the road and of his high-style motorcycle, and usually precludes the need to relocate the turn signals. From aerodynamic and wind/rain-protection standpoints, transparent fairings differ very little from many handlebar-mount touring types, if at all.

FRAME-MOUNT FAIRINGS

A lot of people feel that mounting a fairing to the frame is the *only* way because the motorcycle can better deal with the resultant weight increase and aerodynamic side effects. Almost every fairing in this category gives you no choice in the matter anyway, since by design they're either too heavy to hang on a handlebar or too long to turn with the front end. Frame-mount models also have higher retail prices and more installation complications that can make putting certain ones on certain bikes an all-day job. On the plus side, though, are the superior protection of the more elaborate fairings and the added accessory/storage area they offer. And in combination with a set of sturdy engine guards, a big fairing gives the rider about as much protection during a low-side lay-down as is possible on a motorcycle.

Half Fairings are similar to quarter fairings except that they mount to the frame, and extend a bit further downward and a lot further rearward. They all require clip-ons or other low-risers and they all should offer better handling than quarter fairings because they don't attach to the steering mechanism.

Three-Quarter Sport Fairings usually have everything found on a full racing fairing except that they extend down to just above the engine's sidecovers. Unlike full fairings, though, the three-quarter styles don't require rearset pegs and controls; but since they also make low-rise bars mandatory, that, in combination with the standard footpeg location, can make for a less-than-comfortable seating position.

Full Sport Fairings, also called dolphin fairings, are shaped and styled as replicas of those on real roadracers. They are, in many cases, just longer-yet versions of quarter, half and three-quarter fairings, but in this case they do require rearsets in addition to low-rise bars. Of all the sporty fairings, the full dolphin type affords the greatest increases in top-speed potential and fuel economy (sometimes between 10 and 15 percent) but at the expense of comfort.

Half and Three-Quarter Touring Fairings actually are one and the same, depending upon whether the optional lowers are fitted. These are the types pioneered by the Vetter Windjammer a number of years ago that have become the most popular kind of fairing at the moment. This is because they offer excellent helmet-to-shin weather protection and provide lots of room for added storage and electronic gadgetry. And while most of them are heavy and spacious enough to render any motorcycle ineffective in stoplight drags and twisty-road grands prix, they can help deliver slightly better fuel mileage at cruising speeds. And with rare exception, one model fits almost all motorcycles, meaning that you can trade your old bike and—with a new mounting kit—install the same fairing on the new one.

Full Touring Fairings are made by only a few manufacturers. They differ from full sport fairings in that the windshields are higher and more vertical, plus there's better hand protection, and the stock footpegs and handlebars can be retained. And unlike most sport fairings, full-tour models generally include storage/radio/instrument panels. They're expensive, of course, but offer the greatest amount of protection from the elements but with less of an increase in fuel-mileage efficiency than with full sport fairings.

COMPOUND FAIRINGS

The only alternative to handlebar- and frame-mounted fairings is the compound type, a two-piece affair that tries to combine the best of both worlds. Although a compound fairing is styled to look like it's all one, flowing piece, the top half is mounted to and turns with the handlebar, while the bottom half is stationary and affixed to the frame. Many motorcycle experts envision the compound fairing as the design of the future, for it appears to offer the same low-interference steering of the quarter fairing but with the near-total coverage of a three-quarter or full fairing. They're very expensive and twice as complicated to install as either a handlebar- or frame-mount fairing (since you have to do *both*), and there are only three on the market right now. Still, they're certainly worth looking into.

PUTTING IT ON

Once you're able to tell one fairing from the next, you should be ready to select the one that will grace the front of your bike. After the purchase there will remain the problem of installation, but unless you elect to have the dealer do it, the best advice anyone can give you on that subject is simply to follow the instructions that come with the fairing. Some how-to-do-it directions are better than others, but any instructions are better than no instructions at all. You may have to enlarge a hole here and bend a bracket there to get proper alignment, and anyone who's not comfortable with electrical wiring may have to struggle a bit or go for help. And where possible, it's wise to throw away any radiator-hose-type clamps that are supposed to be used for mounting the fairing brackets to the frame and replace them with U-bolts of the proper size.

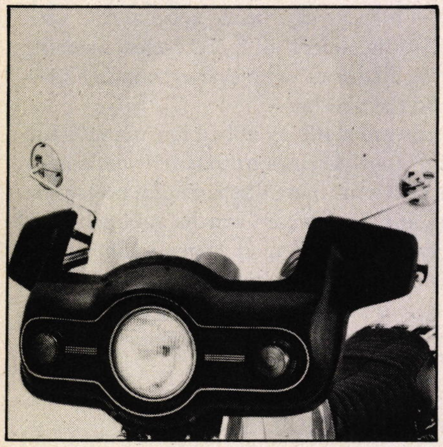
THE FAIRING BUYER'S GUIDE

Now you're ready to peruse our directory of fairings which is arranged according to the categories described above. You'll find the name of the fairing, its price, who makes it, where to reach them and a few pertinent facts about each model. Understand, of course, that this is only a buyer's guide, not a compilation of product evaluations, so don't look for opinions about how any of these fairings work. You *will* find that they're all listed here, however, or at least all that we could locate during a country-wide search for every last fairing made. And they probably represent all the fairings you could easily buy.

So man those wrenches, get out the road maps and polish up those Master Charges. Ready, aim, *fair*!

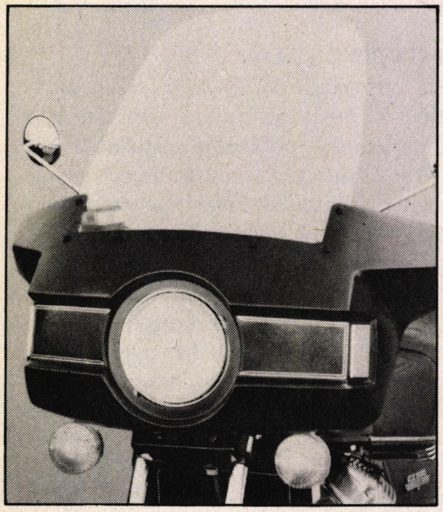
Continued

Handlebar-Mount Quarter Fairings



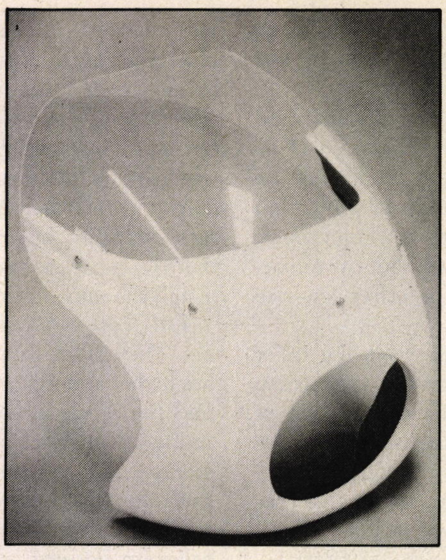
BATES SUPERSHIELD
Bates Industries, Inc.
P.O. Box 2668—GF
Long Beach, California 90801
(213) 435-6551
Fits Honda Hawk and other 400cc models.
$102.95, 1979 prices.

Features the same construction characteristics as the Supershield for mid-sized bikes, but is designed for the Hawk and other 400cc bikes. Lower shell features slightly different styling.



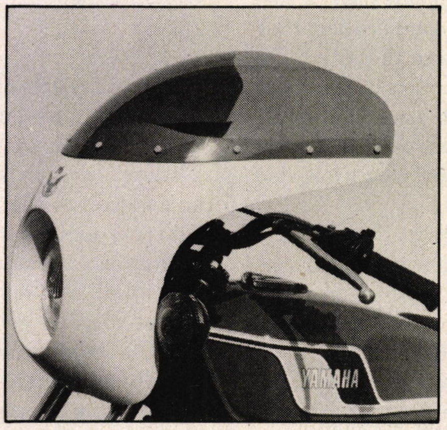
BATES SUPERSHIELD
Bates Industries, Inc.
P.O. Box 2668—GF
Long Beach, California 90801
(213) 435-6551
Fits most mid-size bikes.
$110.95, 1979 prices.

The Supershield features a low center-cut design and a 3/16-inch Plexiglas windshield in clear or green. Two shield heights are available for riders under or over 5′7″. The lower shell is constructed of ABS plastic with a black pebble finish. Matching side reflectors and gold striping are standard. Weighs eight pounds.



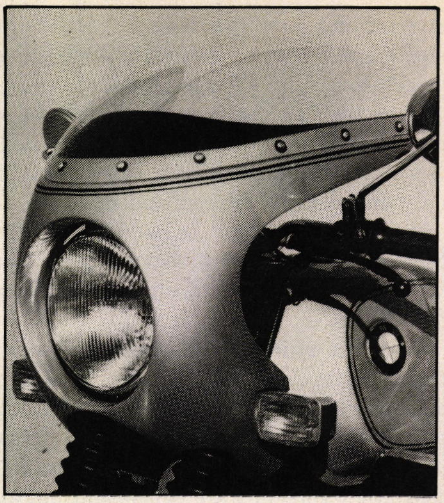
CR-250
Camber Fairing Company
1640 Pomona Avenue
Costa Mesa, California 92627
(714) 646-4852
Fits all lightweight bikes with a 7-inch headlight.
$93.00–$98.00, 1979 prices.

Basically, BMW's R100S quarter fairing shrunk down to fit the 250cc range. Handlaid fiberglass in black or white gelcoat, with a lightweight Plexiglas screen in either clear or smoked. Two-point mounting to the headlight bolts. Requires low-rise European or clubman bars. No dashboard.



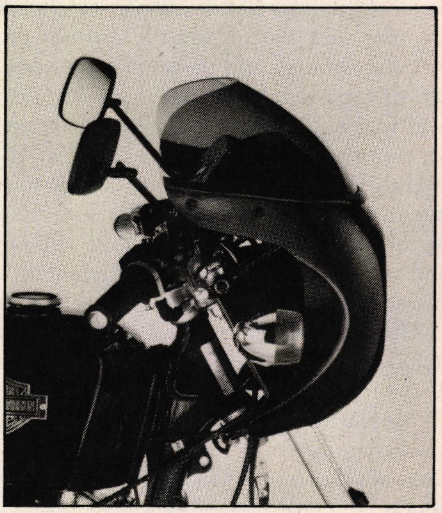
CR-500
Camber Fairing Company
1640 Pomona Avenue
Costa Mesa, California 92627
(714) 646-4852
Fits all medium and large-displacement bikes with a 7-inch headlight.
$110.00–$129.00, 1979 prices.

Similar to BMW's R100S quarter fairing, but cut away to fit around turn signals. Two-point mounting to headlight bolts. Handlaid fiberglass cloth, isothalmic resin. Black or white gelcoat, clear or smoke screen. No dashboard. It may be necessary to use 1-inch-rise European bars or clubman bars. Taller windscreen optional.



CR-600
Camber Fairing Company
1640 Pomona Avenue
Costa Mesa, California 92627
(714) 646-4852
Fits all BMWs since 1974, except '79 R65; can be adapted to most bikes over 500cc.
$139.00–$157.00, 1979 prices.

An exact replica of BMW's R100S quarter fairing. Handlaid fiberglass cloth, textured dashboard with room for two instruments. Fits either 7-inch or 8-inch headlights. Four-point mounting to headlight bolts and turn signal stalks. White or black gelcoat, clear screen or smoke. Optional touring windscreen bolts to same holes. Requires 1-inch-rise European bars or clubman bars. It may be necessary to relocate turn signals.



CAFE RACER FAIRING
Harley-Davidson Motor Co.
3700 West Juneau Ave.
Milwaukee, Wisconsin 53201
(414) 342-4680
Fits all H-Ds; some with modifications.
$175.95.

Handlaid fiberglass, in black only. Handlebar mount, clear Lexan windshield, seal strip around headlight, instrument lamp cluster included, requires low bars. Standard equipment on the discontinued Café Racer.

DUNSTALL HANDLEBAR FAIRING

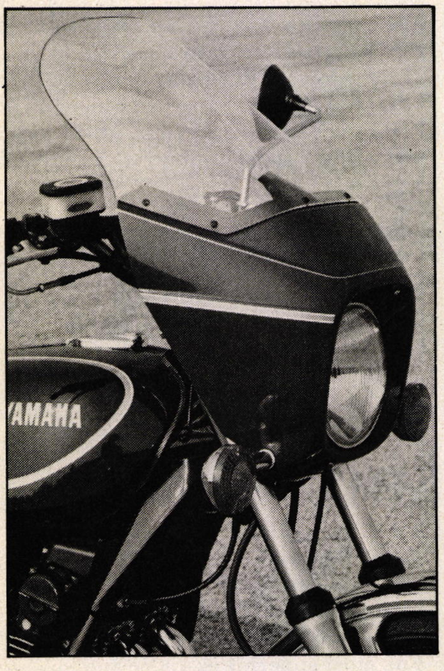
Paul Dunstall Organization
27402 Camino Capistrano
Laguna Niguel, California 92677
(714) 831-0351
Fits most bikes under 200cc.
$80.00.

A tiny quarter fairing for tiddlers. Handlaid fiberglass in black, red or yellow gelcoat, clear windscreen. Two-point mount to headlamp bolts. Molded-in turn signal mounts.

DUNSTALL UNIVERSAL FAIRING

Paul Dunstall Organization
27402 Camino Capistrano
Laguna Niguel, California 92677
(714) 831-0351
Fits all street bikes.
$97.50.

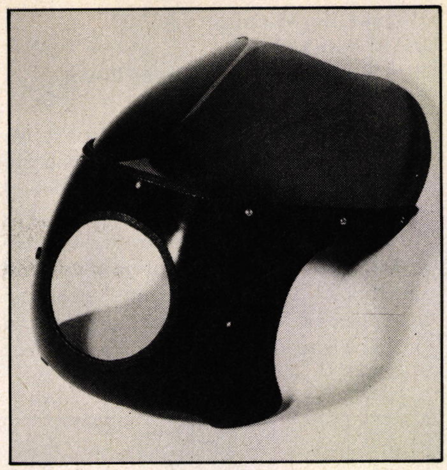
A small, handlebar-mounted quarter fairing with a detachable headlight nacelle that mounts to the stock headlamp mounts. Handlaid fiberglass in black or white gelcoat, clear or tinted screen. Trim bead over all exposed edges, including windscreen. Can be used with stock handlebars and turn signals with modification.



IMOLA

Laminar Incorporated
1514 Fairview, Box 332
Columbus, Ohio 43212
(614) 488-5158
Fits most motorcycles with 7-inch headlights.
$109.95.

Designed to compliment, not dominate the motorcycle, this fairing features handcrafted fiberglass construction, European styling, a high gloss black gelcoat finish, gold striping, integral turn signal mounts and a low weight of less than 5 lbs. Comes complete with mounting instructions, all necessary mounting hardware, wiring and accepts all handlebar styles.



INTERCEPTOR

Graham's Sheet Metal
13026 Raymer Street
North Hollywood, California 91605
(213) 764-1808
Fits most motorcycles over 250cc.
$124.95.

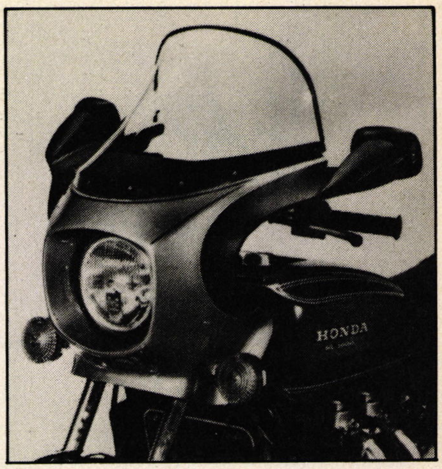
A typical café racer quarter fairing that mounts to the headlight bolts. Very smooth styling in handlaid fiberglass, black gelcoat finish only. Smoked screen. All exposed edges covered with trim bead. Requires relocating the turn signals and either clip-on or clubman bars.

Gran Sport
Kawasaki

KAWASAKI KZ550A GRAN SPORT

Kawasaki Motors Corp.
1062 McGaw Avenue
P.O. Box 11447
Santa Ana, California 92711
(714) 540-9200
Fits KZ550A.

Constructed of hand-laid fiberglass in gloss-black gelcoat, this fairing comes with striping and graphics to match the KZ550A. Windscreen is smoke-tinted. Other features include nylon windscreen mounting screws, rubber trim around the headlight opening and a textured, pebble-grain dash area. The design utilizes stock handlebars, mirrors, turn signals and headlight. Mounting hardware and instructions are included. This fairing comes with a 90-day warranty. Catalog available at Kawasaki dealers.



KRAUSER COCKPIT

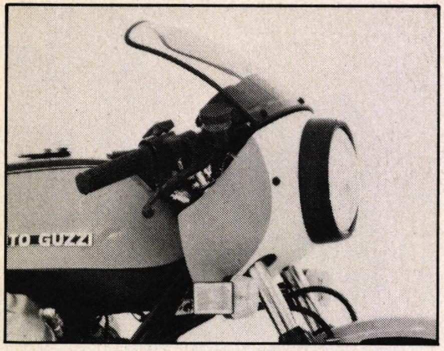
Bob Beach Motorcycle Accessories
2763 West River Parkway
Grand Island, New York 14072
(716) 773-4960
Fits Honda GL1000, can be adapted to other motorcycles.
$346.00, includes mounting.

A German-made café racer quarter-fairing in ABS acrylic. Available in black or yellow. Plexiglas windscreen, dashboard with voltmeter and clock, dual racer mirrors and molded plastic hand guards are standard. Protective bead over exposed windscreen edge. Uses stock 7-inch headlight and turn signals. Requires European bars with 1-inch rise or flat bars.

MIURA

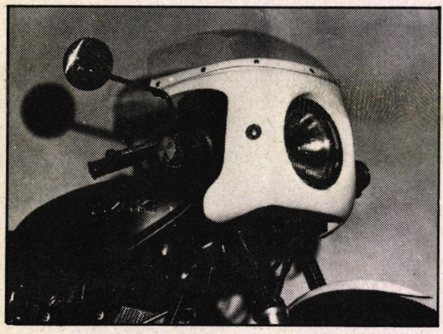
Graham's Sheet Metal
13026 Raymer Street
North Hollywood, California 91605
(213) 764-1808
Fits almost all motorcycles.
$124.95.

A small bikini fairing that mounts to the headlight bolts. Handlaid fiberglass in black gelcoat only. Smoked screen. All exposed edges covered with trim bead. May require relocation of turn signals and/or clip-on handlebars.



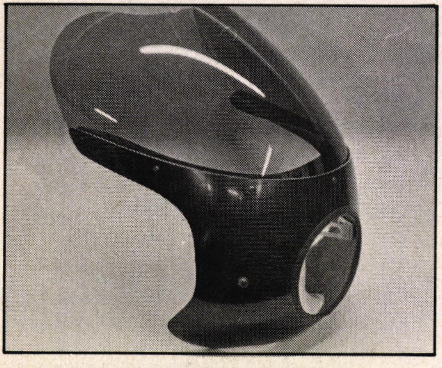
MOTO GUZZI LE MANS
Premier Motor Corporation
Box 145
Hasbrouck Heights,
New Jersey 07604
(201) 288-9696
Fits Moto Guzzi Le Mans, can be adapted to other motorcycles.

Handlaid fiberglass, red and silver finish. Small acrylic windshield with trim bead on exposed edges. Takes 7-inch headlight in separate housing. No provision for turn signals, requires clubman bars.



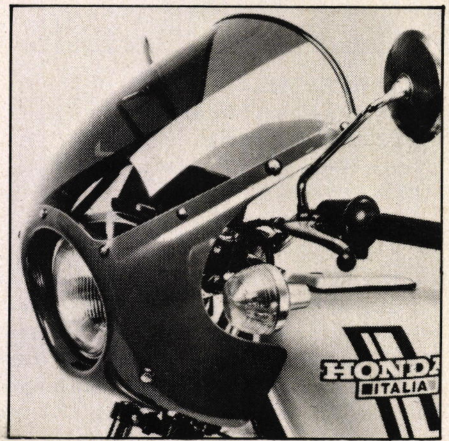
OCELOT QUARTER FAIRING
Ocelot Engineering
895 West Mill Street
San Bernardino, California 92410
(714) 884-0484
Fits most motorcycles.
$49.95, includes mounting hardware.

Made of ABS plastic, this fairing comes in white or black with choice of clear, smoke or blue windshield (smoke and blue cost $2.00 extra). Universal mounting brackets are included. This fairing is to be used with low cafe bars.



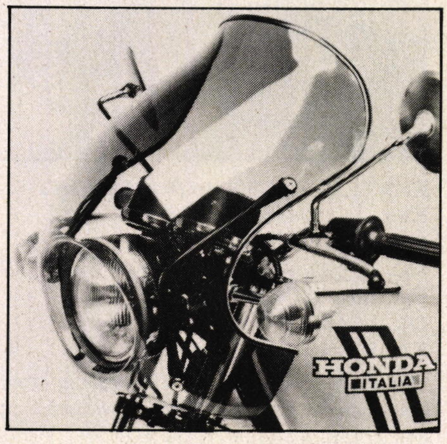
PIRANHA QUARTER FAIRING
Firth Design Group
1119 Riverwood Drive
Burnsville, Minnesota 55337
(612) 890-1570
Fits most motorcycles over 250cc.
$94.75.

An aerodynamic quarter fairing that weighs only 4 lbs. yet features a four-point mounting system to headlight bolts and handlebars. Handlaid fiberglass in black gelcoat only, smoke or clear screen. Separate dashboard stiffener fastens behind fairing with windshield bolts. Trim bead around 7-inch headlight opening. May require turn signal relocation. Low-rise European bars or clubman bars required.



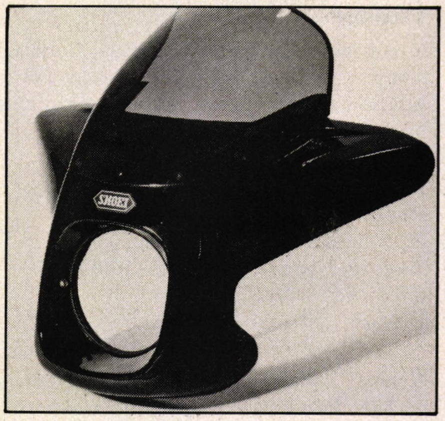
RACECRAFTERS CAFE FAIRING
Racecrafters International Inc.
7801 Canoga Ave.
Canoga Park, California 91304
(213) 999-2811
Fits most motorcycles 400cc and below.
$109.00.

Two-piece construction, universal mounting brackets. Smoked screen with beaded edge. Some modifications may be necessary to fit around turn-signal area. Low bars only.



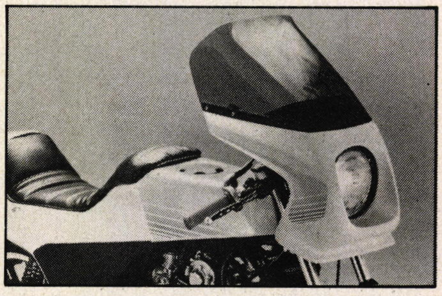
RACECRAFTERS TRANSPARENT CAFE
Racecrafters International Inc.
7801 Canoga Avenue
Canoga Park, California 91304
(213) 999-2811
Fits most motorcycles.
$115.00.

A one-piece smoked plastic fairing available in two sizes; specify bike when ordering. Takes low-rise or clubman bars. Four mounting points; beaded edge around cutouts and upper screen. Some modifications may be necessary to accommodate turn signals.



SHOEI FM-2
Shoei
1717 Pontius Avenue
Los Angeles, California 90025
(213) 477-6051
Fits all motorcycles over 200cc.
$129.95.

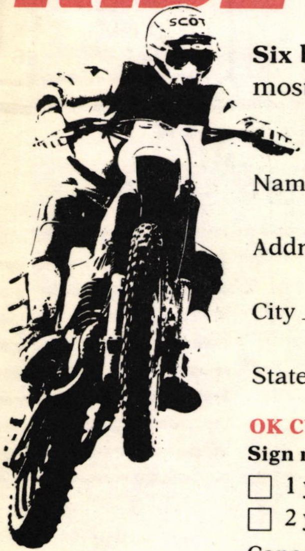
Angular center section with sweeping handguards. Pressure-molded fiberglass, black or white gelcoat. Tinted acrylic screen. Trim bead over exposed edges and around headlight opening. Uses stock 7-inch headlight and turn signals, standard touring or European low bars.



TRACY FAIRING
Tracy Design
709 East Gutierrez
Santa Barbara, California 93103
(805) 963-3521
Fits most superbikes 400cc and up.
$179.95.

Constructed of hand-laminated fiberglass with a Plexiglas smoked windshield, this fairing is available in black, silver or primer; custom paint is optional. The fairing utilizes a stock 6½- or 7-inch headlight and stock turn signals. It is of monocoque construction and the bottom edge is designed with an air dam that is claimed to improve handling and stability. The tilt-up around the edges of the windshield is purported to duct air well away from the rider. Stainless steel and aluminum hardware is included, as are countersunk nylon screws. This fairing can be used with any type of handlebar, but it works best with European low bars. It is DOT-approved and designed to be worn with a full-face shield helmet.

RIDE FOR LESS



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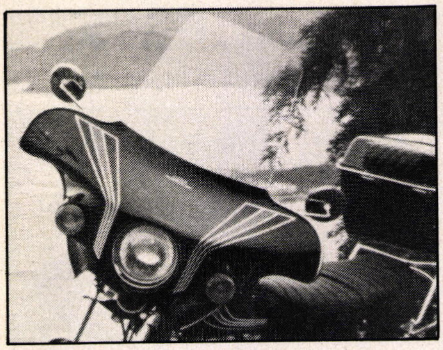
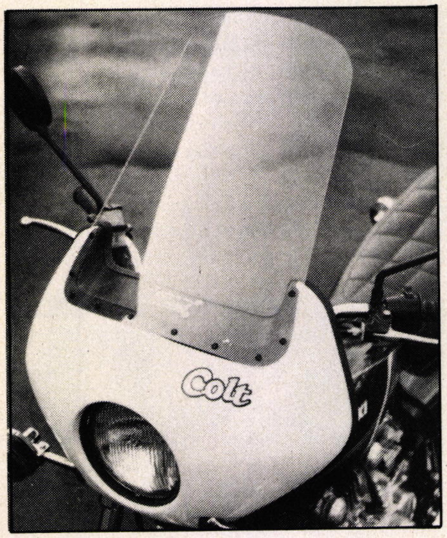
Handlebar-Mount Touring Fairings



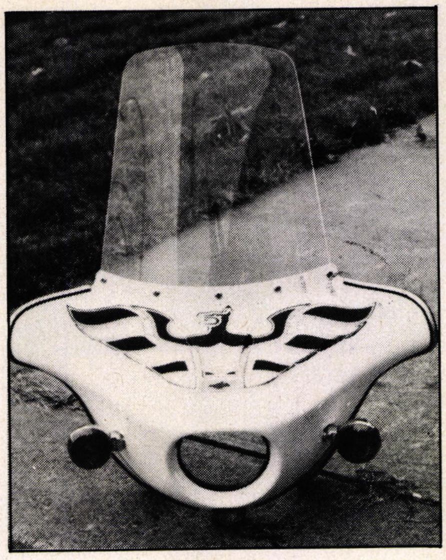
A&B HANDLEBAR FAIRING SPRINT
A&B Fiberglass Productions
15661 Producer Lane
Huntington Beach, California 92649
(714) 892-6649
Fits all motorcycles with a round headlight.
$108.85.

Handlaid fiberglass construction, built-in turn signal/running lights, universal four-point mount that fits any motorcycle, chrome bead on all fiberglass edges. Comes in black or white gelcoat. Factory-matched colors and pin-striping available at extra cost. A&B also makes saddlebags and a trunk to match this fairing.



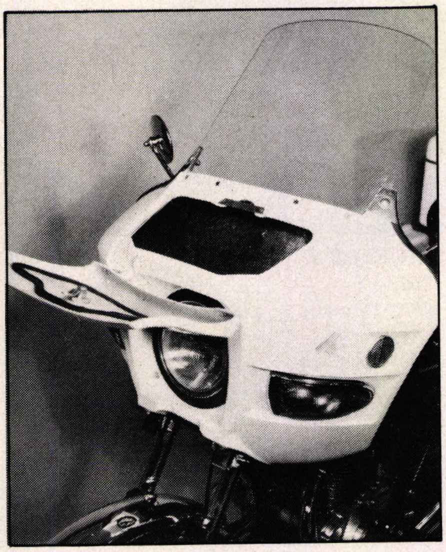
COLT
Don Vesco Products
7565 North Avenue
Lemon Grove, California 92045
(714) 465-8256
Fits most bikes under 400cc.
$79.95.

A tiny handlebar-mount touring fairing for lightweight bikes, the Colt can be used on larger machines with some modifications. Weighs only 5 lbs. Fiberglass cloth in white or black gelcoat. Trim bead over all edges. Clear windshield. Four-point mounting. Uses stock handlebars, turn signals, headlight.



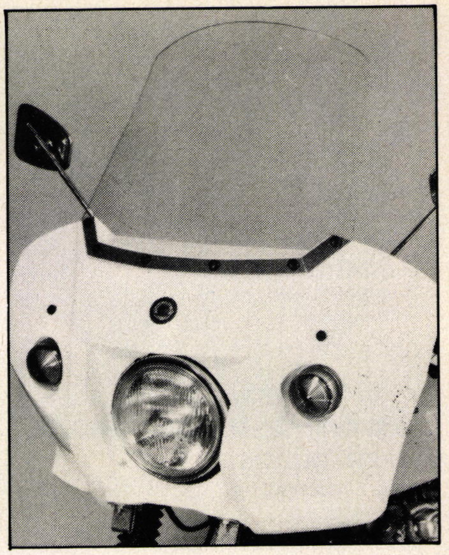
COSMO FAIRING
Cosmopolitan Motors, Inc.
Jacksonville & Meadowbrook Roads
Hatboro, Pennsylvania 19040
(215) 672-9100
Fits most motorcycles over 250cc.
$89.00, standard; $99.00, deluxe.

Identical to the Griffin Fairing.



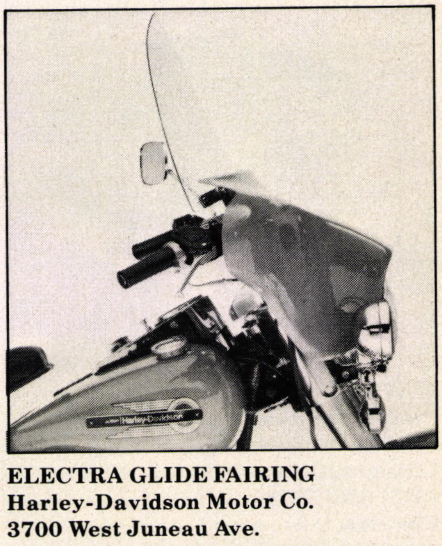
CRAVEN/MITCHENALL CLIPPER
Craven Equipment
Box 472
Freeport, Illinois 61032
(815) 235-2747
Fits over 90 different street bikes, 250cc on up.
$325.00.

Handlaid fiberglass, in white or black gelcoat; weighs 13 lbs. Built-in streamlined turn signals, uses stock headlight, side reflectors. Chrome bead over fiberglass edges. Full interior. Lockable storage compartment reached from front of bike. Mounting hardware is stainless steel. Special hardware is required for fitting this fairing to the Honda CX500: cost is $16.00. Optional color-matching and choice of three different windshield heights. Matching Craven saddlebags and trunk available.



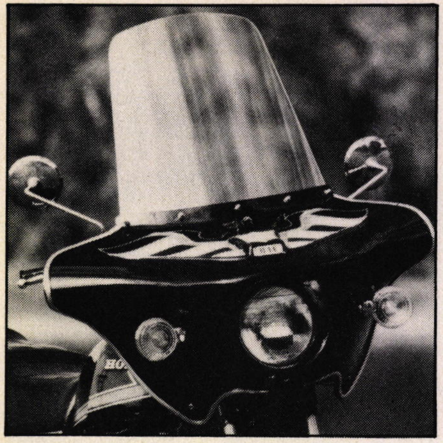
CRAVEN/MITCHENALL CUTTER
Craven Equipment
Box 472
Freeport, Illinois 61032
(815) 235-2747
Fits over 90 different street bikes, 250cc and up.
$220.00.

Similar to the Clipper fairing; bolts to same four-point hardware. Handlaid fiberglass in black or white gelcoat. Built-in turn signals, uses stock headlight. No inner liner, no storage compartments. "Airfoil" at top of windscreen and bottom of fairing to deflect rain water, debris. Clear windscreen, stainless steel mounting hardware. Special hardware is required for fitting this fairing to the Honda CX500: cost is $16.00. Matching Craven saddlebags and touring trunk available.



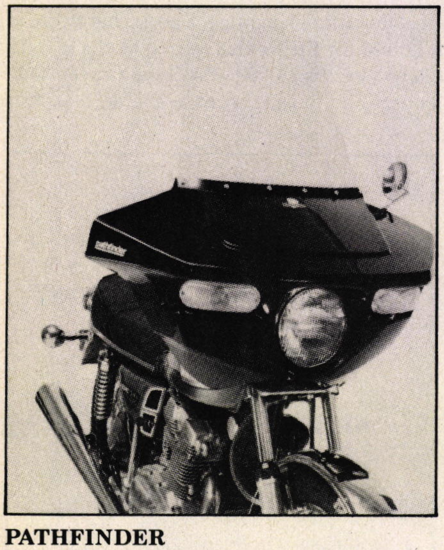
ELECTRA GLIDE FAIRING
Harley-Davidson Motor Co.
3700 West Juneau Ave.
Milwaukee, Wisconsin 53201
(414) 342-4680
Fits all Electra Glides; can be adapted to other motorcycles.
$112.00.

Handlebar mount, handlaid fiberglass, black or white. Can also be color-matched to current H-D models. Uses Lexan windshield and takes stock touring bars.



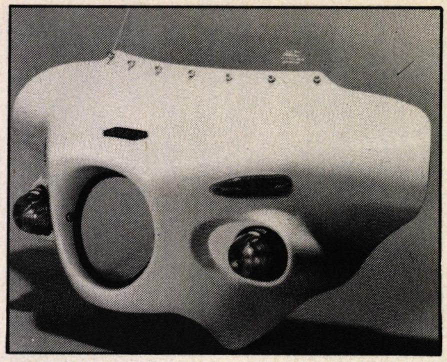
GRIFFIN FAIRING
Griffin Corporation
Box 426
Andover, Kansas 67002
(316) 733-1311
Fits most popular bikes over 350cc.
$119.95, standard; $139.95, deluxe.

Unique in that it comes in a completely transparent model as well as in black or white. Molded polycarbonate, with a separate polycarbonate windshield. Universal four-point mounting kit, fits a 7-inch headlight. Mounting bosses for turn signals. For an additional $24.00, the Max De Luxe adds a chrome trim bead on all exposed edges, built-in turn signals and a fancy decal on the nose. Uses stock handlebars, requires removal of the stock turn signals.



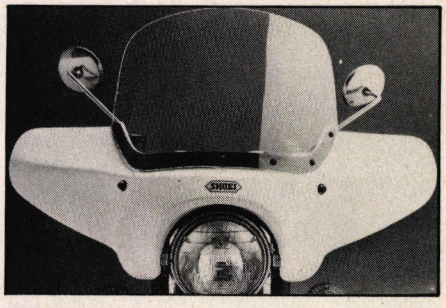
PATHFINDER
Pacifico Incorporated
1625 South East Hogan
Gresham, Oregon 97030
(503) 666-5502
Fits most bikes over 250cc.
$88.00, fairing only; $13.75, windshield.

ABS Acrylic shell reinforced with fiberglass. Black or white finish, clear Plexiglas windscreen in two heights. Four-point mount. Built-in turn signal/running lights. Stock handlebars can be used. Mounting hardware costs $7.50. An optional windshield, two inches higher than standard, is available for $14.60.



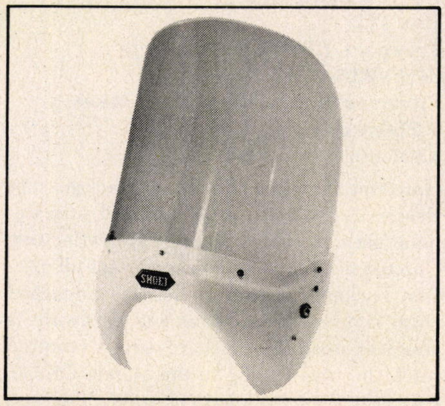
SHOEI SF-1
Shoei
1717 Pontius Avenue
Los Angeles, California 90025
(213) 477-6051
Fits all motorcycles over 200cc.
$139.95.

Pressure-molded fiberglass in black, white, blue, red or silver. Built-in turn signals and running lights. Clear acrylic screen. Weighs 18 lbs. Rubber trim ring around headlight rim. Uses standard handlebars and 7-inch headlight, requires turn signal removal.



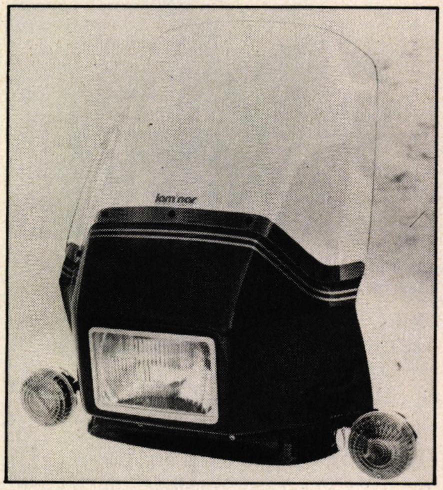
SHOEI SF-2
Shoei
1717 Pontius Avenue
Los Angeles, California 90025
(213) 477-6051
Fits all motorcycles over 200cc.
$79.95.

An unusually short handlebar-mounted touring fairing. Four-point mounting. Pressure-molded fiberglass in white gelcoat only. Clear acrylic screen. Accepts 7- or 8-inch headlight. Turn signals may require relocation.



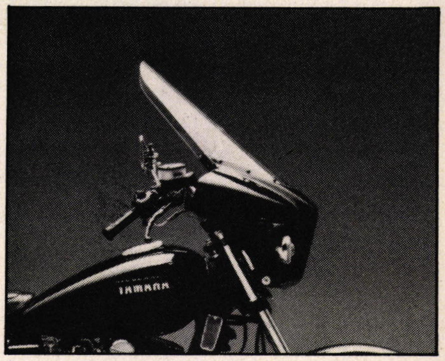
SHOEI SM-1
Shoei
1717 Pontius Avenue
Los Angeles, California 90025
(213) 477-6051
Fits all motorcycles over 200cc.
$55.95.

Smaller than a quarter fairing, with tall windshield. Pressure-molded fiberglass, white gelcoat. Clear screen. Two-point mount. Retains stock handlebar, turn signals and headlight.



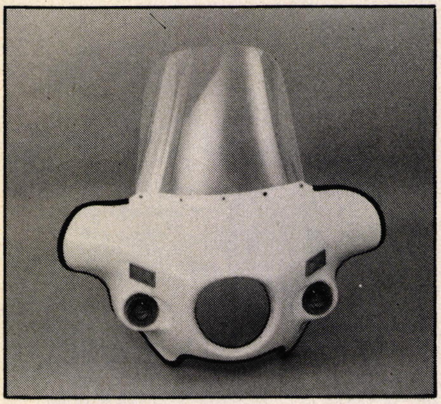
SPORT 1
Laminar Incorporated
1514 Fairview, Box 332
Columbus, Ohio 43212
(614) 488-5158
Fits all motorcycles, including the Honda CBX and Kawasaki KZ1300.
$139.95.

Constructed of hand-laminated fiberglass with a black gelcoat finish. Weighs five pounds. Features integral turn-signal mounts and an optional turn-signal set. Comes in three different windshield styles: cruising, touring and cafe. Can be used with any standard or custom handlebar. Includes gold striping, an H-4 rectangular quartz headlight, a dash panel for three 2⅛-inch instruments and can be installed on the original headlight-mounting ears.



SPORT FAIRING
Yamaha Parts Distributors, Inc.
6555 Katella Ave.
P.O. Box 6555
Cypress, California 90630
(714) 761-7300
Fits most 1980 Yamahas.
$78.95.

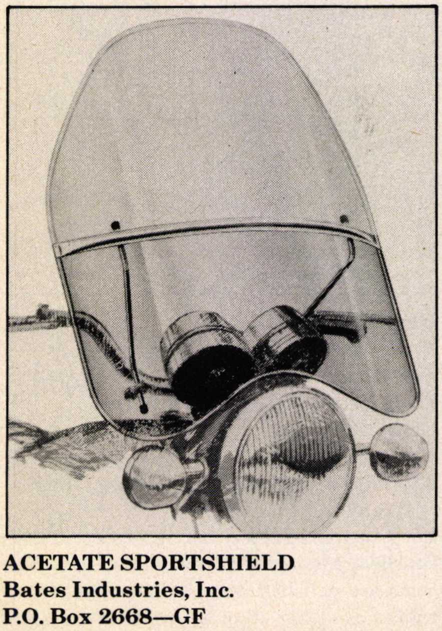
This fairing is designed to attach easily and detach quickly. It reduces drag and wind resistance and is claimed to improve riding comfort. Color-matched to your Yamaha motorcycle. Mounting hardware is sold separately, $20.95. A free catalog is available upon request; all accessories must be ordered through a Yamaha dealer.



TOUR & TRAIL TOURING FAIRING
International/Florida Cycle Supply
7529 Salisbury Road
P.O. Box 5245
Jacksonville, Florida 32207
(904) 733-3363
Fits most motorcycles with a 7-inch round headlight.
$119.95.

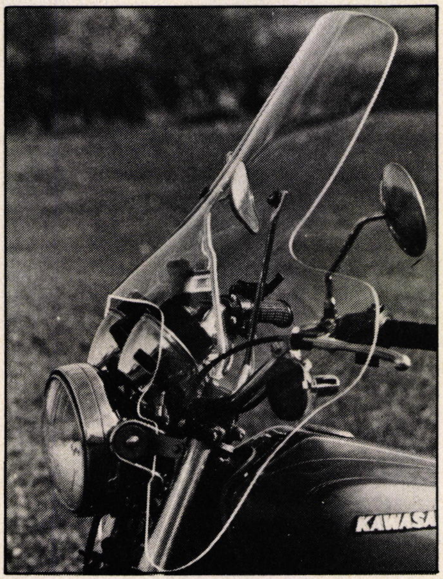
Made of ABS Acrylic; the windshield is Plexiglas. The fairing includes built-in, ready-to-wire, DOT-approved turn signals and two amber reflectors. Available in black or white, the unit is edged with a pebble grain finish and black vinyl trim.

Handlebar-Mount Transparent Touring Fairings



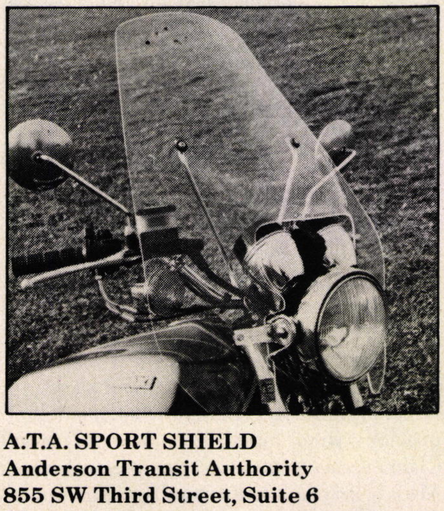
ACETATE SPORTSHIELD
Bates Industries, Inc.
P.O. Box 2668—GF
Long Beach, California 90801
(213) 435-6551
Fits ⅞- and 1-inch handlebars.
$27.95, 18-inch shield; $29.95, 22-inch shield.

Made of acetate plastic material. Entire shield is curved for extra strength. Clear beading around all edges. The shield comes in two widths: 18 or 22 inches, with straight or notched lowers. The front strip is stainless steel; the hardware and arms are chrome-plated.



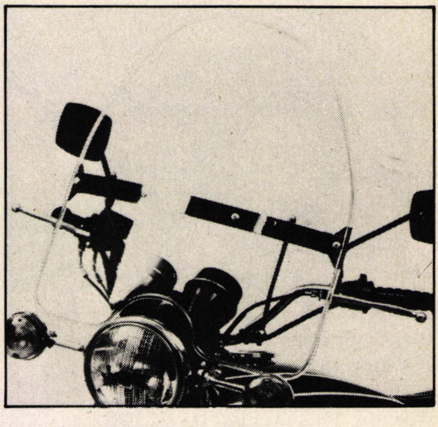
A.T.A. ANDERSON FAIRING
Anderson Transit Authority
855 SW Third Street, Suite 6
New Brighton, Minnesota 55112
(612) 636-2400
Fits most popular bikes over 400cc.
$69.95, clear; $74.95, tint.

A one-piece, fully transparent handlebar-mount fairing. Made of 3/16-inch Plexiglas, available in clear or solar-control bronze. Four-point mounting to handlebar mounts (does not use handlebar clamps) and headlight supports. Some models may require remounting turn signals. Not a universal fit; each fairing individually contoured to a specific motorcycle model.



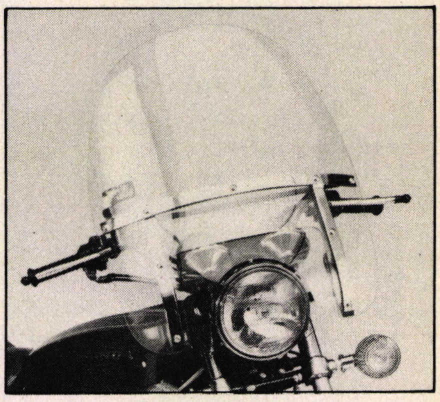
A.T.A. SPORT SHIELD
Anderson Transit Authority
855 SW Third Street, Suite 6
New Brighton, Minnesota 55112
(612) 636-2400
Fits most popular street bikes over 400cc.
$49.95.

Clear, molded Plexiglas ⅛ inch thick, contoured to give protection similar to a handlebar-mount fairing. Four-point mounting to handlebar mounts (does not use handlebar clamps) and headlight support. Not a universal fit; different dimensions for each motorcycle. Turn signals on a few models may have to be remounted.



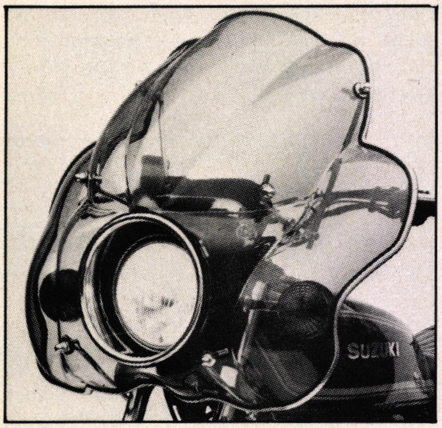
BEADED WINDSHIELD
National Cycle
136 South Eighth Avenue
Maywood, Illinois 60153
(312) 343-0400
Fits all ⅞-inch handlebars.
$22.95, small; $30.95, medium; $33.95, large.

Made of 80-inch Butyrate, this windshield includes taper-locking uprights with high-torsion "U" clamps, chrome-plated hardware and preformed screens for extra rigidity. DOT-approved. Available in three sizes: 14"x19", 17¾"x21" or 22"x24".



HEAVY-DUTY WINDSHIELD
National Cycle
136 South Eighth Avenue
Maywood, Illinois 60153
(312) 343-0400
Fits Honda 400cc and up; Harley-Davidson Hydra-Glides, Duo-Glides and Electra-Glides, Moto Guzzi 850T3 police and civilian models and Moto Guzzi V1000 police and civilian models.
$59.95 beaded; $89.95 Lexan.

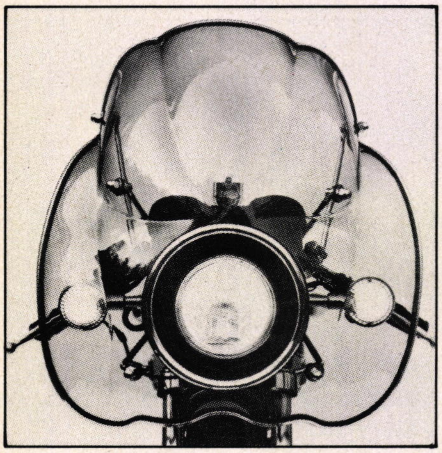
Pre-formed screens are available in either beaded Butyrate or Lexan MR4000. They are DOT-approved, chrome-plated and include black, plastic-coated framework. All models have an adjustable center window and are complete with all necessary hardware and mounting instructions.



LEXAN GT

Hugon Fairing and Distributing Company
27 Loring Road
Weston, Massachusetts 02193
(617) 891-5294
Fits most motorcycles over 250cc.
$239.00.

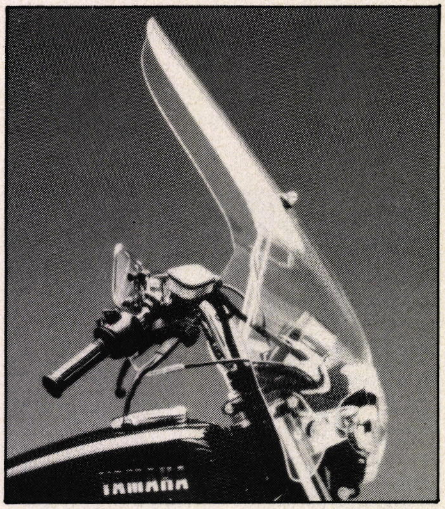
A transparent handlebar-mount fairing made in France. Molded of quarter-inch Lexan, weighs only 14 lbs. Smoke finish. Uses a six-point universal mounting system that can be switched from one bike to another with little trouble. All stainless steel hardware, including trim bead on all exposed edges. An adjustable rubber boot around the headlight prevents glare. Uses stock handlebars and turn signals. Optional deflective wind-screen.



LEXAN SPORT

Hugon Fairing and Distributing Company
27 Loring Road
Weston, Massachusetts 02193
(617) 891-5294
Fits most motorcycles over 250cc.
$239.00.

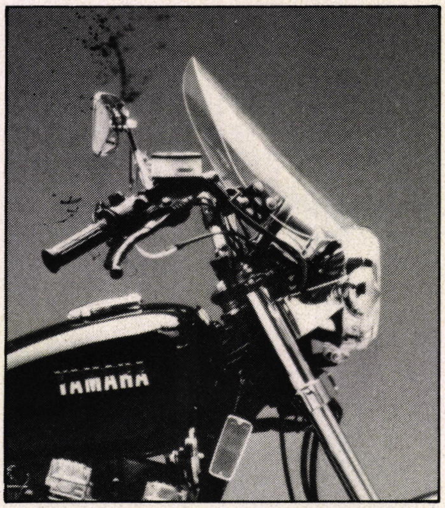
Virtually identical to the Hugon Lexan GT fairing, except cut lower at the width and sides to work with lower handlebars. Six-point universal mounting, smoke Lexan with stainless steel fittings. Requires clip-on bars, or lower, racer-type handlebars.



MAXI CRUISER SHIELD

Yamaha Parts Distributors, Inc.
6555 Katella Ave.
P.O. Box 6555
Cypress, California 90630
(714) 761-7300
Fits most 1980 Yamahas.
$61.95.

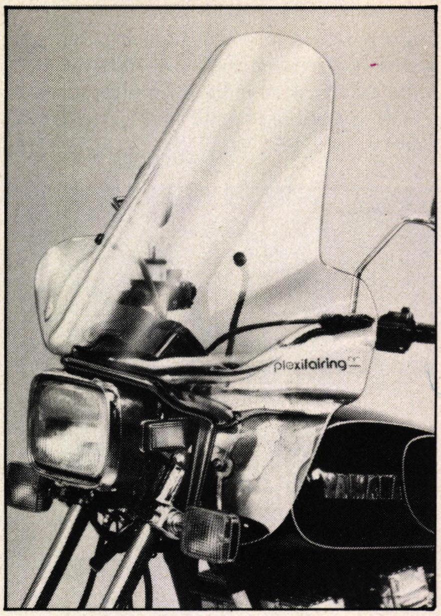
This windshield offers upper-body wind protection and good visibility. Mounting hardware is sold separately, $22.95. A free catalog is available upon request; all accessories must be ordered through a Yamaha dealer.



MINI CRUISER SHIELD

Yamaha Parts Distributors, Inc.
6555 Katella Ave.
P.O. Box 6555
Cypress, California 90630
(714) 761-7300
Fits most 1980 Yamahas.
$44.95, includes mounting hardware.

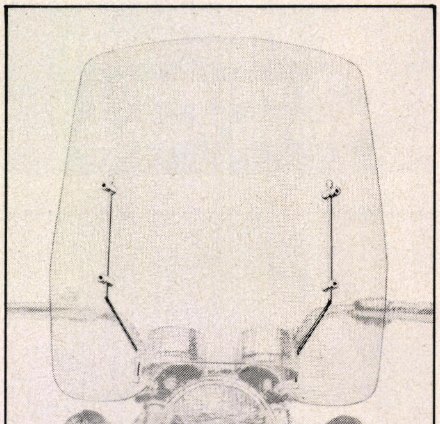
A very small, transparent windshield that provides wind interference for the chest. Claimed easy attachment, easy detachment. Made of acrylic. A free catalog is available upon request; all accessories must be ordered through a Yamaha dealer.



PLEXIFAIRING

National Cycle
136 South Eighth Avenue
Maywood, Illinois 60153
(312) 343-0400
Fits most motorcycles over 250cc.
$109.95.

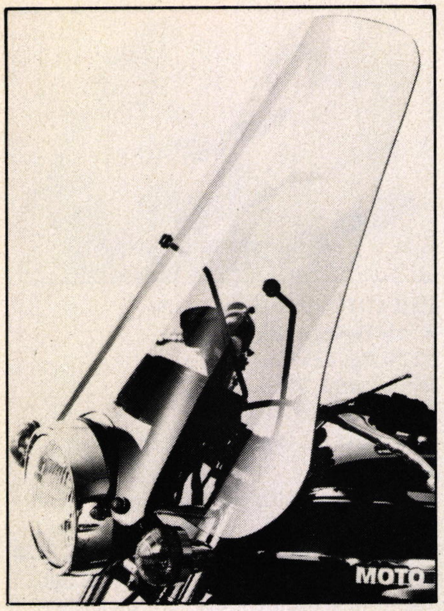
Thermoformed optical acrylic, four-point mounting. Weighs only 14 lbs. All mounting hardware finished in non-glare black, rubber-isolated. Rubber wind seal around headlight and forks. Reflective Scotchlite decals. Uses stock handlebars and turn signals.



PLEXIGLAS SHIELD

Bates Industries, Inc.
P.O. Box 2668—GF
Long Beach, California 90801
(213) 435-6551
Fits most popular motorcycles.
$39.95, 18-inch shield; $43.95, 21-inch shield.

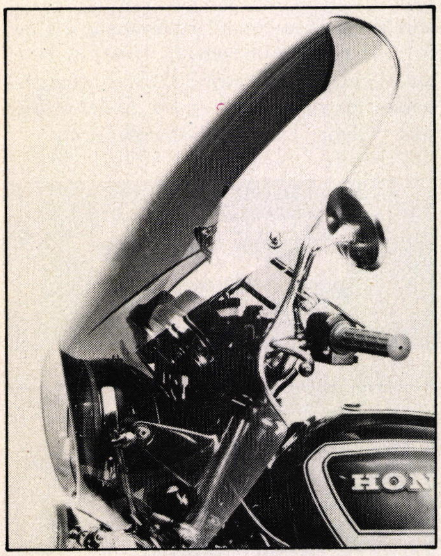
Made of 3/16-inch Plexiglas, all edges are hand-finished. Mounting hardware and universal arms are polished and chrome-plated. Two widths available: 18 or 21 inches. Shields are available in clear or solar green (legal for night riding).



PLEXISHIELD

National Cycle
136 South Eighth Avenue
Maywood, Illinois 60153
(312) 343-0400
Fits most motorcycles.
$54.95.

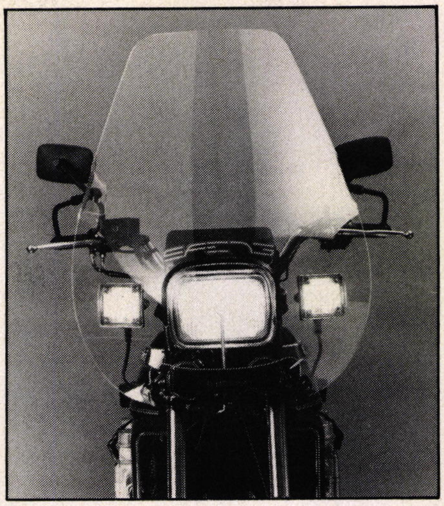
Made of 3/16-inch, two-color Plexiglas with four-point rubber mounting. Claimed to be flutter-free with high-impact resistance. Safety features include glare-reduced, black-finished uprights and brackets. The uprights are safety-angled for unobstructed instrument viewing. Weight is six pounds.



RACECRAFTERS MINI-FAIRING

Racecrafters International Inc.
7801 Canoga Ave.
Canoga Park, California 91304
(213) 999-2811
Fits most medium- and large-displacement motorcycles.
$109.00.

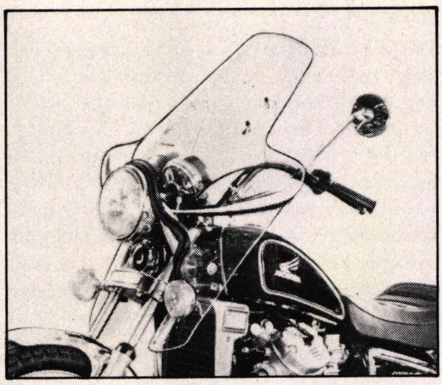
Four-point mounting, smoked windscreen with beaded edge. May require modifications to fit turn signals; varies according to model. Takes most stock handlebars.



SAENG

Surface Aeronautics Engineering
Box 1246
Columbus, Nebraska 68601
(402) 563-2464
Fits motorcycles with handlebar widths of 28–31 inches, with a rise of 3–5 inches. (Basic touring handlebars—not pullback types.)
$237.00.

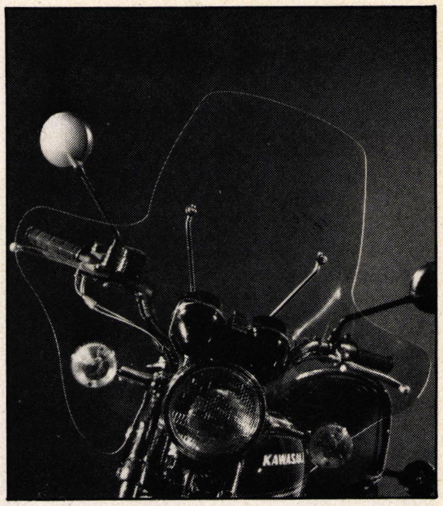
An egg-shaped, transparent touring fairing that mounts to the handlebar ends with adjustable aluminum hardware. Four point mount. The body is molded of quarter-inch Du Pont Lucite. Available in four heights, the SAENG includes built-in fiberoptic turn signals and it is claimed to have excellent aerodynamic penetration. Weighs less than 10 pounds. Headlight "boot" prevents glare and will work with a round or rectangular headlight. Requires turn signal removal.



SILHOUETTE

Silhouette Fairings
Box 1672
Martinsville, Indiana 46151
(317) 342-2300
Fits all motorcycles over 200cc.
$99.95, clear; $109.95, tint.

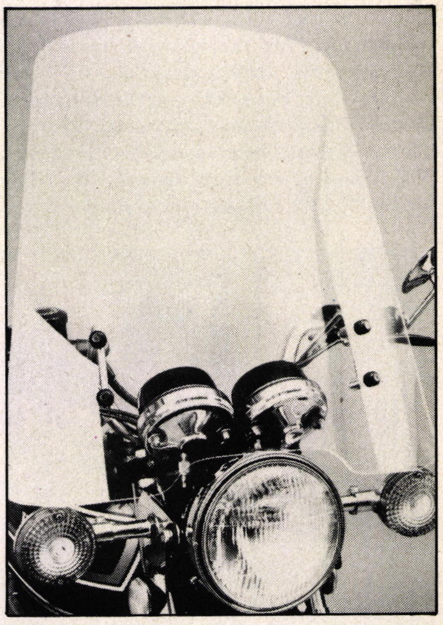
Molded from 3/16-inch acrylic, clear or tinted. Chassis-mounts to the pivoting point of the bike's fork with a flexible mounting gasket. Features include a soft rubber gasket around headlight and triple clamp. Weighs only 9 lbs. Retains stock handlebars, turn signals. Universal mounting brackets can be switched from one bike to another.



SLIP STREAMER II

C-F Inc.
869 Pierce Butler Route
St. Paul, Minnesota 55104
(612) 489-8053
Fits all street bikes over 250cc.
$69.95, clear; $74.95, tinted.

Made from 3/16-inch Lucite, either clear or tinted. Weighs only 8 lbs. Four-point mount to handlebar and headlight bolts.

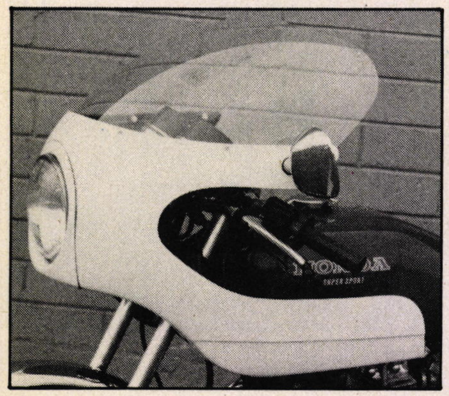


UNIVERSAL ACRYLIC WINDSHIELD

National Cycle
136 Eighth Avenue
Maywood, Illinois 60153
(312) 343-0400
Fits all 7/8-inch handlebars.
$26.95, small, clear; $28.95, small, smoke; $32.95, medium, clear; $34.95, medium, smoke; $36.95, large, clear; $38.95, large, smoke.

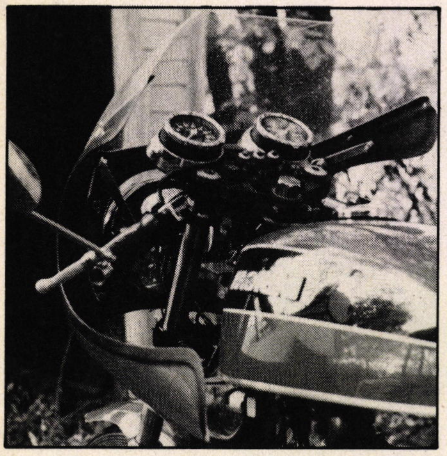
Constructed of 3/16-inch Plexiglas. This windshield includes four-point rubber mounting, low-profile uprights and a breakaway windscreen feature. It is chrome-plated and includes high-torsion "U" clamp hardware. Available in three sizes: 19½"x 19½", 21½"x21½" or 23½"x23½".

Frame-Mount Half Fairings



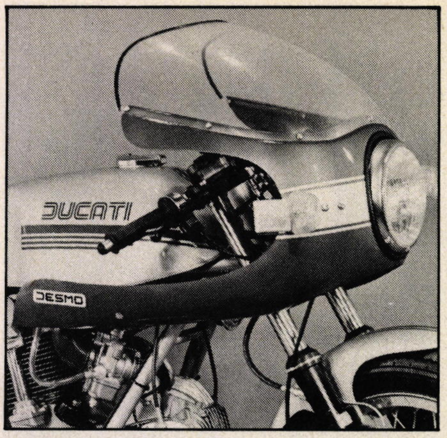
CAFE ROYALE
Don Vesco Products
7565 North Avenue
Lemon Grove, California 92045
(714) 465-8256
Fits most bikes over 250cc.
$246.25, for 200s, 350s; $252.70, for 400s.

Frame-mounted. Handlaid fiberglass in black or white gelcoat. Clear or tinted acrylic bubble windshield. Full interior with two storage compartments, vinyl tonneau covers. 7-inch headlight in automotive-style adjustable mount. Fiberglass headlight bezel. Requires chrome clubman bars (included with fairing). No provision for turn signals. Matching lowers ($50.00) and solo seat available.



CUPOLINO MORINI SPORT
Herdan Corporation
Route 61
Port Clinton, Pennsylvania 19549
(215) 562-3155
Fits Moto Morini 350, can be adapted to other lightweight bikes.
$180.00.

Must be used with clip-ons or clubman bars. Handlaid fiberglass, red or silver finish. Clear Plexiglas screen. Trim bead around 7-inch headlight opening. Built-in headlight bucket. No provision for turn signals. Matching tank and solo seat also available.



DUCATI SUPER SPORT
Berliner Motor Corporation
Box 145
Hasbrouck Heights, New Jersey 07604
(201) 288-9696
Fits Ducati twins, can be adapted to many other bikes.
$175.00.

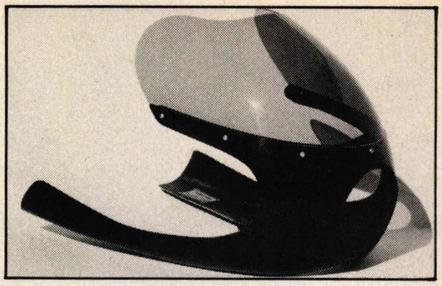
Cut very full to fit a variety of clip-on locations. Handlaid fiberglass in blue and silver. Clear bubble screen. Trim bead around headlight opening and windshield edge. Takes 7-inch headlight; mounting bosses for turn signals. Must be used with clip-on bars.

DUNSTALL GT/SPORTS FAIRING
Paul Dunstall Organization
27402 Camino Capistrano
Laguna Niguel, California 92677
(714) 831-0351
Fits Norton Atlas and Commando, all Triumph and most popular Japanese bikes over 750cc, can be adapted to other bikes.
$200.00.

The GT is Dunstall's classic frame-mount half fairing, designed in the early Sixties for the Dunstall Dominator and used on the Norton Commando Production Racer. The Sports Fairing is a wider, more fully cut version for Japanese multis. Handlaid fiberglass in silver, black, red, yellow or blue. Dashboard for speedometer, tach and one switch, special adjustable holder for headlight. Clear screen. Requires clip-ons or clubman bars. There is no provision for turn signals. Matching café racer seat and gas tank available.

DUNSTALL KAWASAKI FAIRING
Paul Dunstall Organization
27402 Camino Capistrano
Laguna Niguel, California 92677
(714) 831-0351
Fits Kawasaki H1, H2, Z-1 and KZ1000, can be adapted to other bikes.
$265.00.

A very angular version of Dunstall's frame-mounted half fairing. Handlaid fiberglass in red, yellow, black and blue gelcoat. Clear or smoked windscreen. Uses stock headlight and turn signals. Requires clip-ons. There is a matching seat/tank unit and front fender.



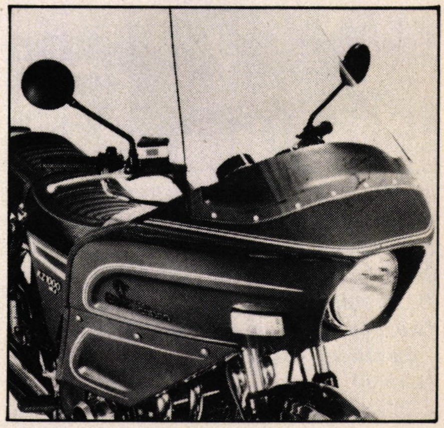
PIRANHA HALF FAIRING
Firth Design Group
1119 Riverwood Drive
Burnsville, Minnesota 55337
(612) 890-1570
Fits most motorcycles over 250cc.
$94.75.

Must be used with clubman bars or clip-ons; no provision for turn signals. No mounting hardware supplied. Uses stock 7-inch headlight; trim bead around opening. Handlaid fiberglass in black gelcoat only, smoke or clear screen. Separate dashboard stiffener fastens behind fairing with windshield bolts.

RICKMAN MK II
Target Products
2724 West Main Street
Alhambra, California 91801
(213) 284-3238
Fits Honda CB750 and Kawasaki Z-1/KZ1000; can be adapted to other bikes.
$219.00.

Derived from the classic dolphin fairing fitted to Rickman Metisse kits. The half fairing is handlaid fiberglass, in black or white gelcoat. Rubberized bead on all exposed edges. Clear or blue-tinted windscreen. Uses the stock headlight, retains adjustability. Mounting bosses for stock turn signals. Must be used with clubman bars supplied with fairing.

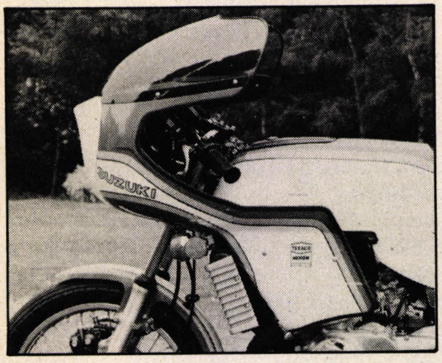
Frame-Mount Three-Quarter Fairings



CAMBER COBRA
Camber Fairing Company
1640 Pomona Avenue

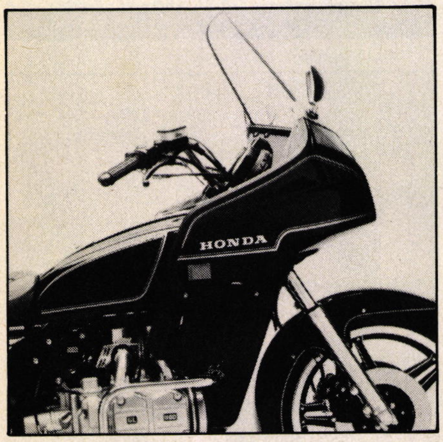
Costa Mesa, California 92627
(714) 646-4852
Fits most popular motorcycles over 550cc.
$400.00.

Constructed of hand-laminated fiberglass, available in black or white gelcoat. The fairing has lockable, hinged storage compartment covers, its own headlight and turn signals. Leg shields are standard. Optional color matching and pinstriping available.



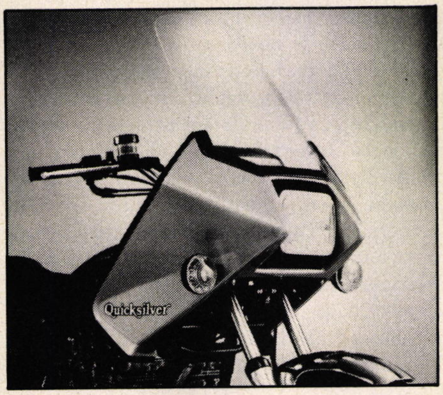
DUNSTALL SEMI-SPORT FAIRING
Paul Dunstall Organization
27402 Camino Capistrano
Laguna Niguel, California 92677
(714) 831-0351
Fits most street bikes over 250cc.
$265.00.

Complete with removable lowers, the Semi-Sport is sold in a universal configuration that fits most bikes and accepts "European"-style bars, a "touring" configuration with a tall windscreen that accepts standard handlebars and a café racer version that requires clip-ons. Except for the shape of the windscreen, all three fairings are identical. Handlaid fiberglass in black, white, red or yellow gelcoat. Three-point frame mounting. External nacelle takes 7-inch headlamp. Turn signals must be relocated to fairing mount. Trim bead covers all exposed edges, including windscreen edges. Clear or smoke windscreen.



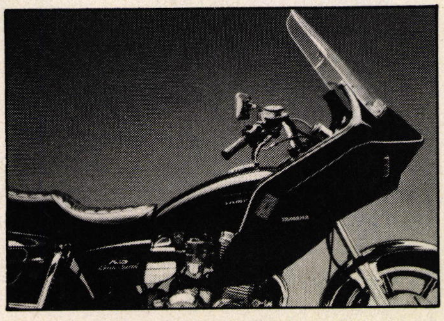
INTERSTATE FAIRING
American Honda Motor Co.
P.O. Box 50
100 West Alondra Blvd.
Gardena, California 90247
(213) 327-8280
Fits GL-1100 STD, CB900 Custom; standard on 1980 GL-1100 Interstate.
$440.00 (approx.).

Honda's first bolt-on fairing will be available this spring only as a color-matched, striping-matched accessory. Standard features include construction of injection-molded ABS plastic, GE Lexan windshield, adjustable windshield height of about 1½ inches, quartz headlight, integral turn signals/running lights, one lockable storage compartment and another with a vinyl tonneau cover and snap closing. The headlight is adjustable via a knob on the dashboard. The fairing is wired completely, including accessory power leads. Mounting hardware and instructions are included. Many options available, including matched lowers, voltmeter, clock, altimeter and a Clarion-designed AM-FM digital radio.



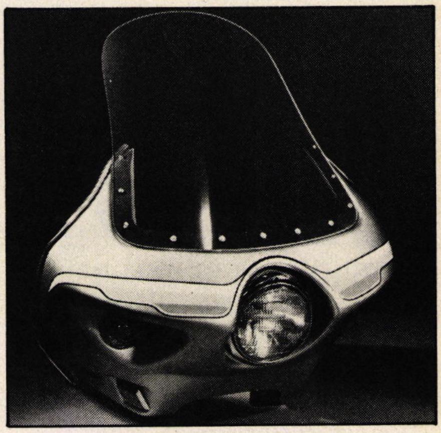
QUICKSILVER
Vetter Corporation
1150 Laurel Lane
San Luis Obispo, California 93401
(805) 541-2900
Route 136 East
Rantoul, Illinois 61866
(217) 893-9300
Fits most motorcycles 400cc and up.
$159.95; windshield, hardware extra.

Constructed of thermoformed ABS plastic. Standard colors are black, white and silver. Features include a rectangular headlight, black accent turn signals, pebble-grained interior, vinyl tonneau covers and black edge trim. Two windshield heights are available. Wind protection is about ⅔ of that found behind the Windjammer IV. This fairing weighs 17 pounds. A rectangular quartz headlight is optional.



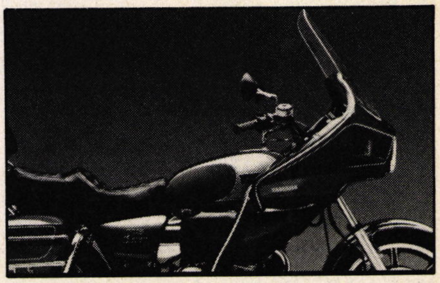
SILVER BIRD II FAIRING
Yamaha Parts Distributors, Inc.
6555 Katella Ave.
P.O. Box 6555
Cypress, California 90630
(714) 761-7300
Fits most 1980 Yamahas.
$359.95.

This fairing features a black-out grille, built-in air ducts for air-flow comfort, an adjustable headlight and locking storage compartments. Also included are built-in turn signals with a sequential signal light, running lamps and side-marker light action. It comes color-matched to your 1980 Yamaha. Free catalog available upon request; all accessories must be ordered through a Yamaha dealer.



TORQUE FREE SPIRIT
Torque Products
895 West Mill Street
San Bernardino, California 92410
(714) 884-0484
Fits most motorcycles.
$289.00.

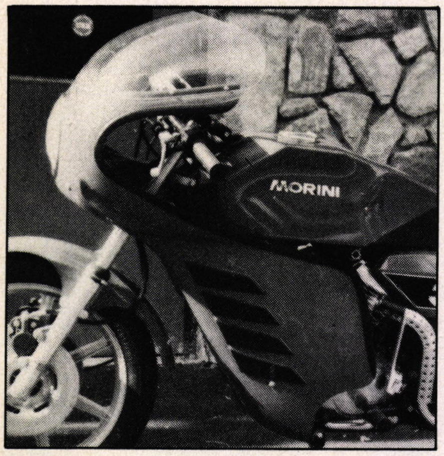
Torque's Free Spirit is made of ABS plastic and is available in white, black or silver. Built-in turn signal/running lights and side marker lights are included. Options are a dashboard for radios or CB radios, snap vents for the windshield and lower leg shields.



XS1100 FAIRING
Yamaha Parts Distributors, Inc.
6555 Katella Ave.
P.O. Box 6555
Cypress, California 90630
(714) 761-7300
Fits Yamaha XS1100.
$339.95.

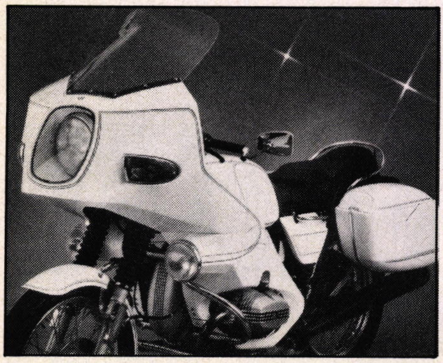
Features include a wide-angle rectangular headlight, dash panels and a locking storage compartment. Available in Diamond Silver or New Ruby Red. Matching lowers, saddlebags and travel trunks available. Mounting brackets are separate, $39.95. A free catalog is available upon request; all accessories must be ordered through a Yamaha dealer.

Frame-Mount Dolphin Fairings



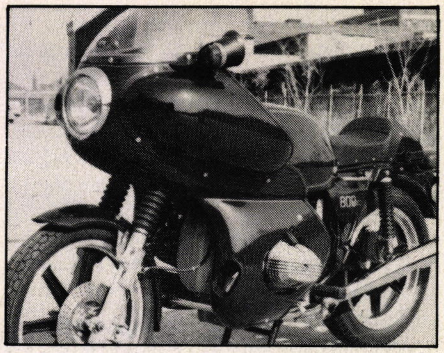
CARENATURA MORINI SPORT
Herdan Corporation
Route 61
Port Clinton, Pennsylvania 19549
(215) 562-2155
Fits Moto-Morini 350, can be adapted to other medium-weight bikes.
$230.00.

Cut to work with stock footpegs. Handlaid fiberglass, red or silver finish. Clear plexiglas screen. Trim bead over all exposed edges. Built-in headlight bucket uses stock headlight. Requires clip-on bars, no provision for turn signals. Matching tank and solo seat available.



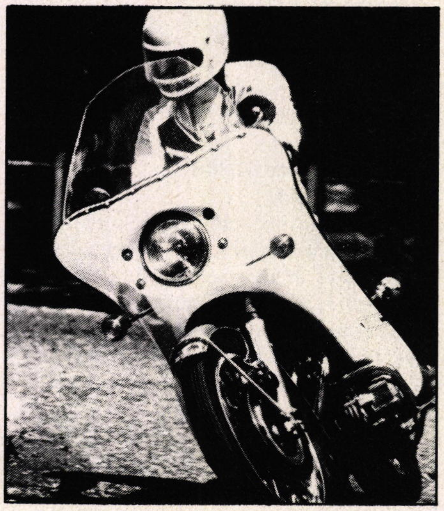
THE CONCORDE
Michael Bondy Associates
Box 123
Haworth, New Jersey 07641
(201) 385-2552
Fits all post 1973 BMWs, including the R65; available soon for certain Japanese touring bikes.
$645.00.

Removable lowers with built-in driving lights. Built-in turn signals and 8-inch headlight. Built-in frame-mounted safety bar to be used as an integral part of the mounting hardware. Adjustable headlight. Two lockable storage compartments, plus mounting space for CB. Handlaid fiberglass in white or black gelcoat. Beaded edge on fiberglass and windshield.



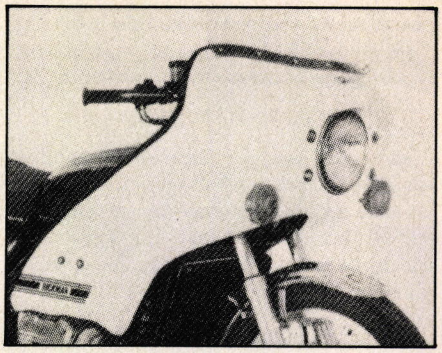
HABERMAN SPITFIRE I
Sidecar Restorations, Inc.
115 South 20th Street
St. Louis, Missouri 63103
(314) 241-9314
Fits all 1974 and later BMWs.
$700.00.

Made in Germany exclusively for BMWs. The basic fairing is one piece of handlaid fiberglass, color-matched and pinstriped. The lowers are not removable, but the entire fairing mounts to quick-detach fittings isolated in rubber to prevent vibration. The bulbous handlebar "pods" detach independently. Quartz-halogen 7-inch headlight, clubman handlebars and Talbot combination turn signal/mirror units are included in the price. Clear Plexiglas windscreen and trim bead over all exposed edges. Requires removal of stock turn signals and handlebars. Matching Heingerike 8-gallon fuel tank and racing seat available.



RICKMAN EXECUTIVE
Target Products
2724 West Main Street
Alhambra, California 91801
(213) 284-3238
Fits Honda CB750 and GL1000, Kawasaki Z-1/KZ1000; can be adapted to other bikes.
$416.00.

Uses stock handlebars and footpegs. Handlaid fiberglass, black or white gelcoat. Full interior with two storage compartments, dashboard for auxiliary gauges. Uses stock 7-inch headlight and turn signals. Nylon trim bead over all exposed edges, clear acrylic windshield.



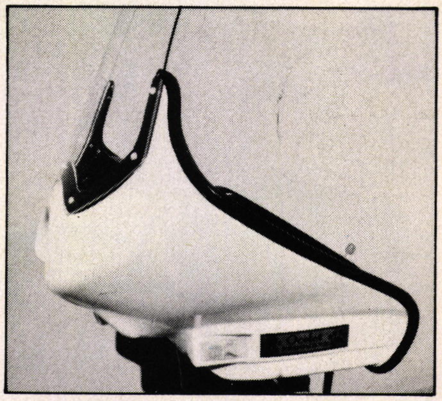
RICKMAN EXECUTIVE
Target Products
2724 West Main Street
Alhambra, California 91801
(213) 284-3238
Fits Honda GL1000.
$416.00

This fairing is the same as the RICKMAN EXECUTIVE, but dimensionally styled for the Honda GL1000.

RICKMAN SCORPIOUS
Target Products
2724 West Main Street
Alhambra, California 91801
(213) 284-3238
Fits Honda CB750 and Kawasaki Z-1/KZ1000; can be adapted to other bikes.
$319.00.

The same pseudo-racer fairing used on the Rickman CR Sports 1+1 kit. Fiberglass in red, orange, white or Kawasaki-green gelcoat. Nylon trim bead over all exposed edges. Plexiglas windscreen in clear or blue tint. Dashboard for auxiliary gauges. Uses stock headlight, mounting bosses for stock turn signals. Requires lowrise bars.

Frame-Mount Three-Quarter Touring Fairings



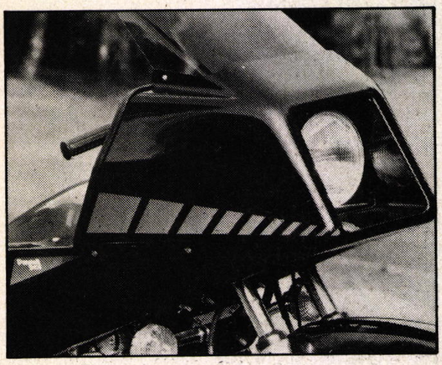
AIRSTREAM
Ocelot Engineering
895 West Mill Street
San Bernardino, California 92410
(714) 884-0484

Fits most motorcycles over 250cc.
$179.95, includes mounting hardware.

Vacuum-molded ABS plastic, weighs only 21 lbs. Black or white finish. Full interior with two lockable storage compartments. Clear acrylic windshield in two heights. Trim molding over all exposed edges. Uses stock headlight and turn signals from your bike. Optional windshield vents, side marker lights, pinstriping and lowers.

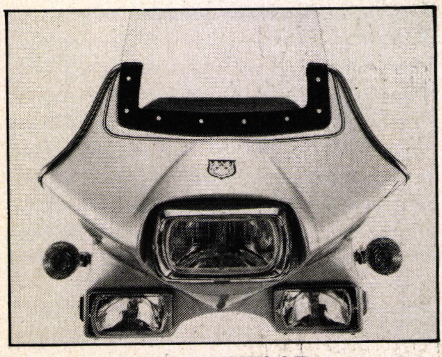
CHARGER GT
Custom Products
14755 Aetna Street
Van Nuys, California 91411
(213) 994-7771
Fits most bikes over 350cc.
$239.00.

Fiberglass, black or white gelcoat. Full interior with two tonneau-covered storage compartments. Clear acrylic windshield. Chrome bead over all exposed edges. 7-inch headlight, mounting bosses for stock turn signals. Optional cigarette lighter.



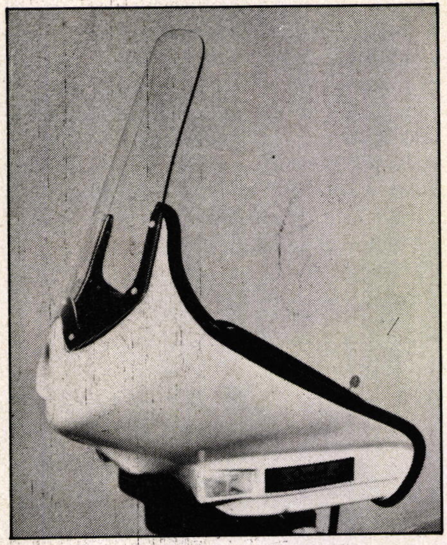
DUNSTALL DART
Paul Dunstall Organization
27402 Camino Capistrano
Laguna Niguel, California 92677
(714) 831-0351
Fits Honda CB750, Kawasaki KZ1000, Suzuki GS750/1000, Yamaha XS750/1000.
$345.00.

Handlaid fiberglass, in black or white gelcoat. Turn signals mount to fairing bracket, 7-inch headlight. Removable lowers and special Dunstall handlebars included. Trim bead over all exposed edges. Lightweight clear windscreen with aerodynamic lip. Requires replacement of handlebars and turn signals.



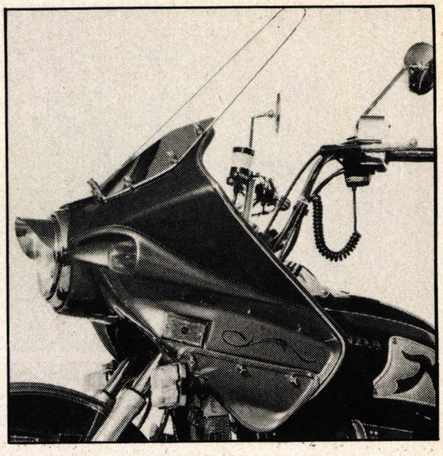
EL DORADO FLEETWOOD
Motorcycle Accessories, Ltd.
1960 East County Rd., F
White Bear Lake, Minnesota 55110
(612) 429-7121
Fits most big tourers over 750cc.
$599.00 without options, could run as high as $1200.00 with all options listed.

Custom hand-built fiberglass construction, some edges are chrome beaded. Rectangular 5 x 9-inch quartz-halogen headlight plus two built-in 4 x 7-inch halogen driving lights. Built-in turn signals plus three separate marker lights per side. White gelcoat finish or metalflake paint job. Color-matching available. Standard equipment includes tonneau covers for the two storage compartments and cigarette lighter. Options include your choice of quartz clock, voltmeter, oil pressure, oil temperature, cylinder head temperature and service hours gauges in a four-gauge dashboard, crushed velvet lining for the storage compartments, pin-striping, four radio speakers, AM/FM cassette radio with antenna and 40-channel CB with antenna.



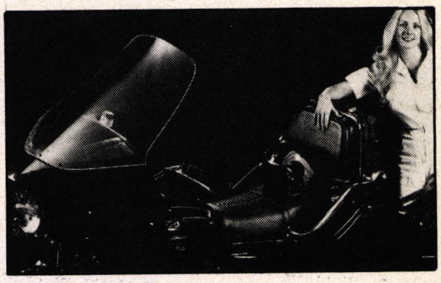
ELIMINATOR STX
Calafia Industries
540 West Lambert Road
Brea, California 92621
(714) 990-2777
Fits all popular motorcycles over 500cc.
$329.95, B & W; $389.95, color-matched.

ABS Acrylic, weighs only 15 lbs., less than half of comparable fiberglass fairings. Calafia uses a unique reverse thermo-molding technique so the finish surface never touches a mold. Full interior with storage compartments, snap-on tonneau covers, map straps, dashboard for optional instruments, mounting boss for CB radio. Built-in turn signal/running lights, side marker lights. 7-inch headlight; rectangular headlight version is available. Chrome bead over all edges. Black or white acrylic finish. Color-matched to most motorcycles at extra cost. Clear windshield is 19 inches high; optional 17-inch or 21-inch windshields are available. Matching ABS lowers, saddlebags and travel trunk available.



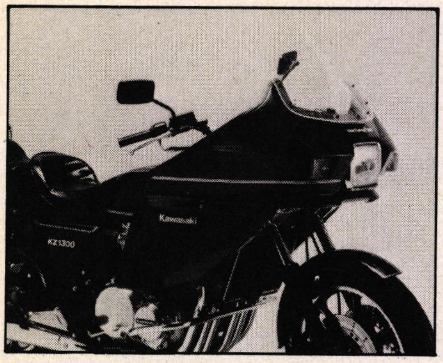
FREEFLOW FAIRING
Custom Dressers
6421 Cox Avenue
Oklahoma City, Oklahoma 73149
(405) 672-7564
Fits all motorcycles over 500cc.
Prices available in 1980 catalog.

Full interior. Two storage compartments covered by snap-on tonneaus. Handlaid fiberglass construction in black or white gelcoat; color-matching or custom painting available. A chrome Fairing-guard mounted below the windscreen acts as an AM/FM radio antenna. Built-in turn signals and side marker lights, 7-inch headlight. Chrome bead over all exposed edges. Plexiglas windscreen in choice of heights. Dashboard with built-in radio mount and speakers, custom-decorated tonneau covers and chrome-plated fairing mounts are optional. Matching touring seat, saddlebags and touring trunk available. 1980 catalog available for $3.00 (refundable with first purchase).



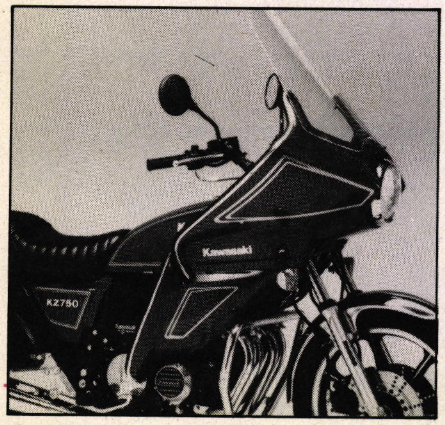
GENERATION II
Arthur Fulmer
260 Monroe
Memphis, Tennessee 38101
(901) 525-5711
Fits all popular motorcycles over 500cc.
$1500.00, roughly.

Part of the complete "Generation II" travel system. (Includes a luggage rack, travel trunk with built-in backrest and detachable suitcase-type saddlebags.) Side marker lights, 7-inch headlight. Turn signals mount to special frame. Handlaid fiberglass, full interior. Two lockable storage compartments plus lockable glove box. Full dashboard with two built-in stereo speakers is standard; your choice of two VDO gauges, custom AM/FM and CB radios and color-matched paint is optional.



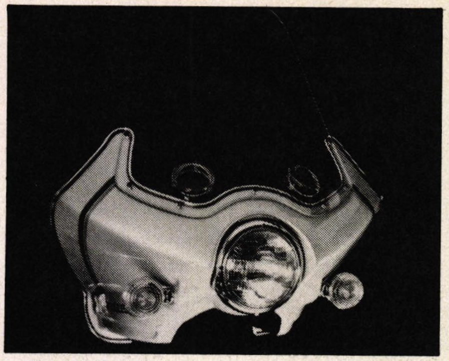
KAWASAKI KZ1300 GRAN TOURING FAIRING
Kawasaki Motors Corp.
1062 McGaw Avenue
P.O. Box 11447
Santa Ana, California 92711
(714) 540-9200
Fits KZ1300.

Hand-laid fiberglass construction, finished in Ameron with graphics to match the motorcycle. Three-point mounting hardware is included. Other features include two lockable storage compartments, a remote headlight adjuster, pebble-grain dash and interior finish, direction-adjustable air vents, dash area for radio or instruments and a clear windscreen with nylon mounting screws. Color-matched lowers and a taller windshield are optional. This fairing uses the stock KZ1300 quartz headlight and turn signals. A 90-day warranty is included. Catalog available at Kawasaki dealers.



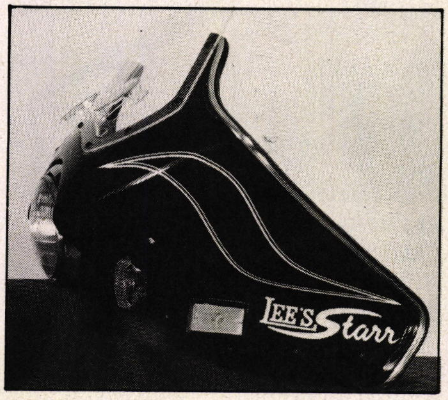
KAWASAKI by VETTER
Kawasaki Motors Corp.
1062 McGaw Avenue
P.O. Box 11447
Santa Ana, California 92711
(714) 540-9200
Fits KZ650, KZ750, KZ1000.

Made of ABS acrylic in colors and striping matched to the motorcycles listed above. Features include a right-hand locking storage compartment and a left-hand soft vinyl storage area. Uses stock turn signals and includes a built-in headlight and wiring harness. Frame-mounting brackets and nylon mounting screws for the windscreen are included. Optional tall and pop-vent windscreens are available. A 90-day warranty is included. Catalog available at Kawasaki dealers.



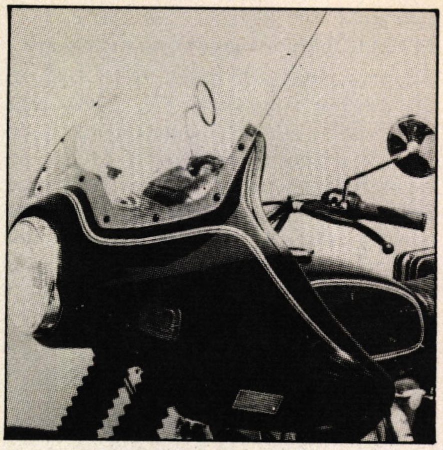
KUTTER
Howe Engineered Sales Company
Box 642
Cedar Rapids, Iowa 50613
(319) 236-9609
Fits most popular bikes over 500cc.
$243.33.

Molded Cycolac; available in black or white finish; color-matching costs an extra $83.14. Clear 3/16-inch acrylic windshield, available in two heights, with or without air vents. Vinyl tonneau covers for the two storage compartments. Built-in turn signal/running lights, side marker lights, 7-inch headlight. Full interior, chrome bead over all exposed edges. A wide choice of options is available, including locking storage compartment covers, compartment liners, cigarette lighter, pinstriping, halogen headlight, matching ABS lowers and a radio housing which includes stereo speakers and a mounting boss for AM/FM or CB. Matching travel trunk, saddlebags and trailer are available.



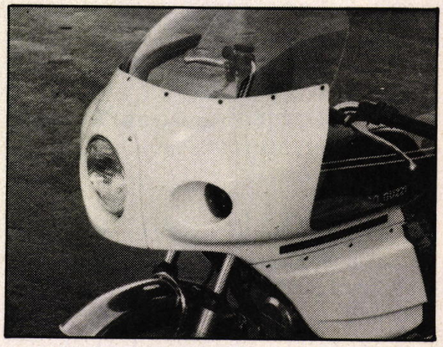
LEE'S STARR
Lee's Rider and Cycle Accessories
125 East Inez Street
Tucson, Arizona 85706
(602) 294-5875.
Fits most motorcycles over 350cc.
$239.95, plus shipping.

Handlaid fiberglass in black or white gelcoat or silver paint, with contrasting pin-stripe in your choice of color. Full interior with two storage compartments. Snap-on interior with two extra pockets. Clear acrylic windshield in your choice of two heights. Optional snap vents. Chrome trim bead over 11 exposed edges. Built-in turn signal/running lights, 7-inch headlight. Standard cigarette lighter. Uses stock handlebars. Standard-size windshield mount included.



LUFTMEISTER
Butler & Smith
135 East Stanley Street
Box 5450
Compton, California 90220
(213) 638-8508
Walnut Street
Norwood, New Jersey 07648
(201) 767-1223
Fits all BMWs since 1976.
$325.00, approximately.

Handlaid fiberglass color-matched to BMW factory colors with contrasting pinstripe. Full interior with snap-on tonneau-covered storage boxes. Features a headlight adjusting knob on the "dashboard," plus holes for two instruments. Acrylite shatterproof windshield. Side running lights. Chrome molding on all fiberglass edges. Optional "Dryper" closes off hole around fork tubes, and matching lowers are available for $79.50. Saddlebags and trunk available, too.



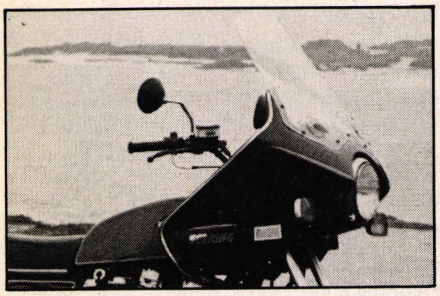
RABID TRANSIT
Don Vesco Products
7565 North Avenue
Lemon Grove, California 92045
(714) 465-8256
$421.95.

Handlaid fiberglass in white or black gelcoat. Full interior. Two storage compartments with tonneau covers. Dashboard with room for auxiliary gauges and radio. Choice of clear bubble windscreen or taller touring windshield. Built-in turn signal/running lights, side reflectors, 7-inch headlight in automotive-style adjustable mount. Fiberglass headlight bezel. Set-back touring bars or chrome 1-inch-rise low bars are included. Requires automotive-style rearview mirrors. Optional lowers and matching seat.

RICKMAN POLARIS

Target Products
2724 West Main Street
Alhambra, California 91801
(213) 284-3238
Fits Honda CB750 and Kawasaki Z-1/KZ1000; can be adapted to other bikes.
$427.00.

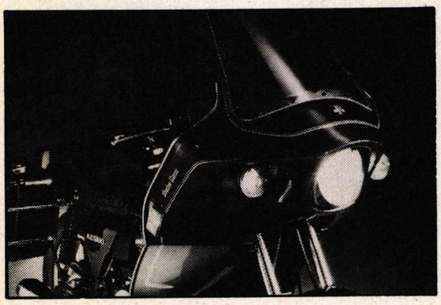
Fiberglass in black or white gelcoat. Full interior with two storage compartments, tonneau covers. Lockable covers optional. Nylon trim bead over all exposed edges. Clear Plexiglas windscreen. Standard 60/55-watt Lucas quartz-halogen headlight, built-in aerodynamic turn signal/running lights. Full dashboard with room for four gauges plus radio. Uses stock handlebars; turn signals and headlight must be removed. Optional fiberglass lowers and safety bars.



SEBRING

A & B Fiberglass Productions
15661 Producer Lane
Huntington Beach, California 92649
(714) 892-6649
Fits all popular bikes over 500cc.
$289.30.

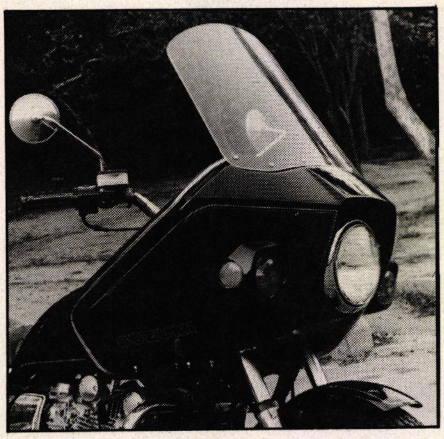
Full interior, storage boxes with snap-on tonneau covers. Comes in black or white gelcoat, with side reflectors and 40/50-watt sealed-beam headlight. Chrome bead covers all fiberglass edges. Optional windshield vents, side lights, pinstriping, cigarette lighter. Available in factory-matched colors, done in the mold and impregnated into the surface so the paint will "far outlast anything else available." A & B also makes saddlebags and a trunk to match the Sebring.



SHADOW CLASSIC

Pacifico Incorporated
1625 South East Hogan
Gresham, Oregon 97030
(503) 666-5502
Fits most bikes over 500cc.
$375.00.

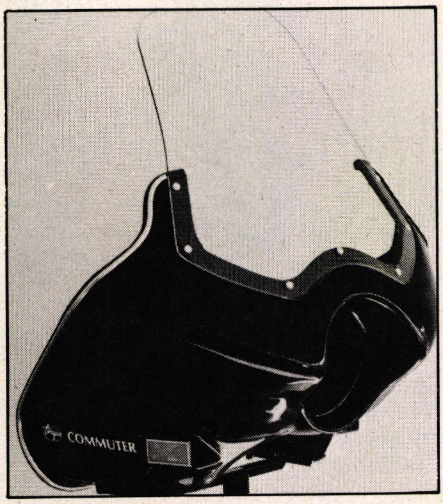
Constructed of durable two-piece shell of ABS plastic. Four running lights. Room to mount instruments, CBs or stereo internally. Locking storage compartments are weather sealed. The fairing features a new automotive type ventilation system that lets air be directed in any direction. Turn signals flash sequentially, headlight is adjustable. Available in white with black striping, black with gold striping and silver with black striping. Mounting hardware costs $44.00. Color match available for an additional $25.00. Lowers are available for $55.00 ($65.00 for color-match).



SUZUKI FAIRING

U.S. Suzuki Motor Corp.
13767 Freeway Drive
Santa Fe Springs, California 90670
(213) 921-4461
Fits Suzuki GS550, GS750, GS850, GS1000; can be adapted to other bikes.

Suzuki sells the Calafia Eliminator STX as its "house" fairing; the only difference is pinstriping matched to the Suzuki line.



TORQUE COMMUTER

Torque Products
895 West Mill Street
San Bernardino, California 92410
(714) 884-0484
Fits most motorcycles over 350cc.
$179.95.

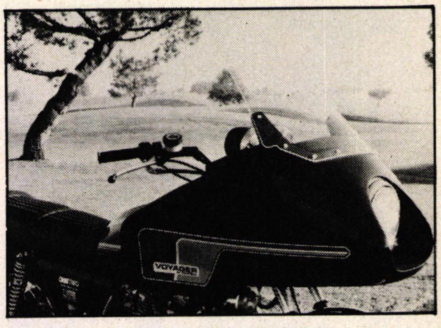
Torque's Commuter is actually the Ocelot Airstream with a different name. Price includes brackets.

Vindicator

VINDICATOR II

Vetter Corporation
1150 Laurel Lane
San Luis Obispo, California 93401
(805) 541-2900
Route 136 East
Rantoul, Illinois 61866
(217) 893-9300
Fits most motorcycles over 350cc.
$343.00; windshield, hardware extra.

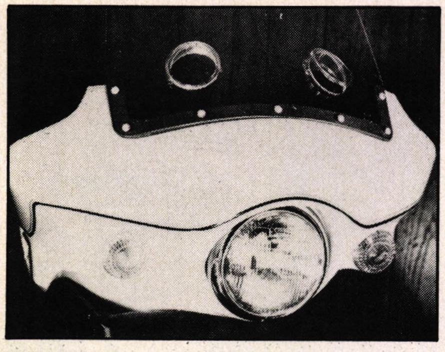
The Vindicator II is basically a less expensive Windjammer IV. Made of thermoformed ABS plastic in white, black, silver or primer. Full interior, no dashboard. Acrylic windshield in four heights. Two storage compartments, one with lockable cover, one with vinyl tonneau cover. Uses stock turn signals on mounting pads. 7-inch headlight supplied. Cigarette lighter optional, and pinstripes standard. Lowers available for $80.50.



VOYAGER/VOYAGER SPORT

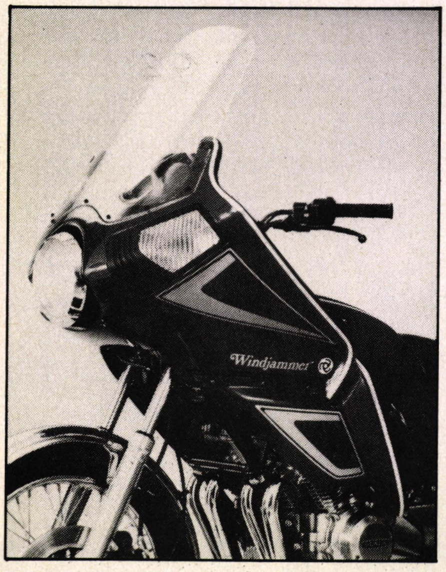
Kimstock, Inc.
2200 South Yale Street
Santa Ana, California 92704
(714) 546-6850
Fits most popular bikes over 400cc.
$279.95.

The molded polyethylene Voyager Sport weighs 24 lbs. and comes in white or black finish. Color-matching is available only on certain models. Full interior with two lockable storage compartments. Dashboard with room for instruments or radio. Uses stock handlebars, turn signals attach to fairing mount. 7-inch headlight. The Voyager adds windwings to the Voyager Sport Acrylite windshield for an additional $70. These are connected to the front forks by a cable, and swing out of the way for handlebar clearance at full steering lock.



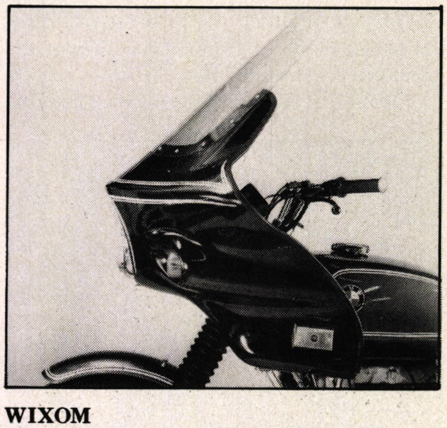
WINDSOR
Rotational Molding
17038 South Figueroa Street
Gardena, California 90248
(213) 770-0942
Fits most bikes over 500cc.
$225.00, approximate.

Rotational-molded of CL100 Marlex, comes in a black or white finish. Color-matching available. Standard pinstriping. Clear acrylic windshield with snap vents. Full interior, two storage compartments with lockable lids, built-in turn signal/running lights. Dashboard with room for four gauges and radio. Weighs only 20 lbs. Uses stock handlebars. Matching saddlebags, travel trunk and gas tank available.



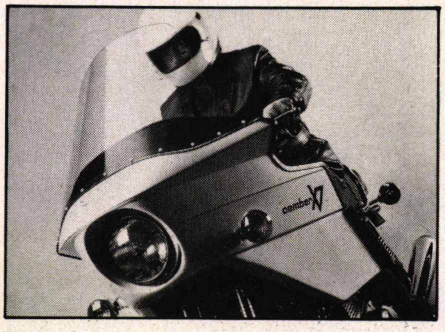
WINDJAMMER IV
Vetter Corporation
1150 Laurel Lane
San Luis Obispo, California 93401
(805) 541-2900
Route 136 East
Rantoul, Illinois 61866
(217) 893-9300
Fits most motorcycles over 350cc.
$330.00; windshield, hardware extra.

SS with a different name. This is a refinement of the original Vetter design, characterized by aerodynamic turn signal/running lights set into the leading edge of the fairing. Constructed of thermoformed ABS plastic in white, black, silver or primer; color-matching available. 7-inch headlight. Acrylic windshield, choice of four heights. Full interior, no dashboard. Weighs 28 lbs. One lockable storage compartment. Uses stock handlebars; stock turn signals must be removed. Optional Bosch quartz-halogen headlight, Fiamm air horns, cigarette lighter, pinstripes and pop vents. Lowers available: $80.50; $95.00 for color-match.



WIXOM
Wixom Bros.
260 Monroe Avenue
Memphis, Tennessee 38103
(901) 529-0704
Fits most motorcycles over 400cc.

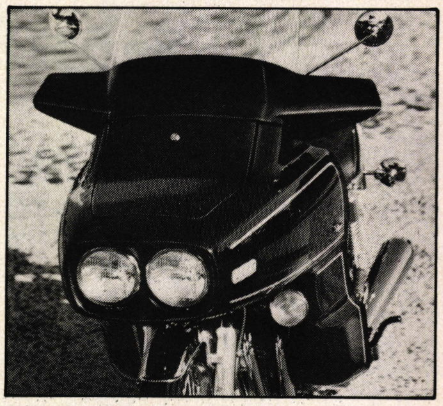
Handlaid fiberglass in black or white gelcoat, color-matching available. Contrasting pinstripes. Nylon trim on all exposed edges. Clear acrylic windshield. Full interior with two storage compartments, tonneau-covered. Dashboard with room for gauges and radio. Built-in turn signals, side marker lights, 7-inch headlight. Chrome-plated brackets with optional safety bars. Matching saddlebags and trunk available.



X-7
Camber Fairing Company
1640 Pomona Avenue
Costa Mesa, California 92627
(714) 646-4852
Fits most popular motorcycles over 500cc.
$370.00, 1979 price.

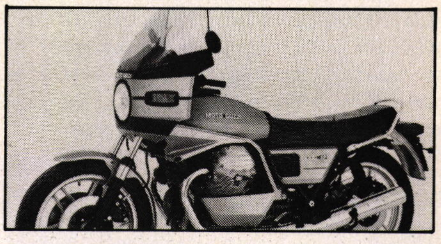
Weighs only 24 lbs.; handlaid fiberglass cloth, isothalmic resin. Full interior with two lockable storage compartments. Clear acrylic windscreen. Built-in turn signals, 7-inch headlight. Trim bead over all exposed edges. Price includes removable lower panels. Large dashboard with mounts for CB, stereo and speakers and instruments. White or black gelcoat. Optional factory color-matching and pinstriping.

Compound Fairings



BATES CLIPPER
Bates Industries
Box 2668
Long Beach, California 90801
(213)435-6551
Fits Honda CB750/GL1000, Kawasaki KZ1000, Suzuki GS 1000, Yamaha XS1100, BMW R100/7, Suzuki GS850G
$475.00, 1979 price.

Lower shell mounts to frame, upper shell mounts to handlebar. Separate frame-mounted lowers. Dual 5-inch headlamps, side reflectors. Two lockable storage compartments with rigid covers, plus large front "trunk." Clear or solar green windshield adjusts up and down over 3-inch range. Black or white fiberglass gelcoat; factory-matched colors at extra cost. Pin-striping standard. Dashboard with optional digital clock, map light and cigarette lighter. Optional AM/FM radio, factory installed. Requires turn signal relocation, detail modifications. Matching saddlebags, trunk and Super Shield available.



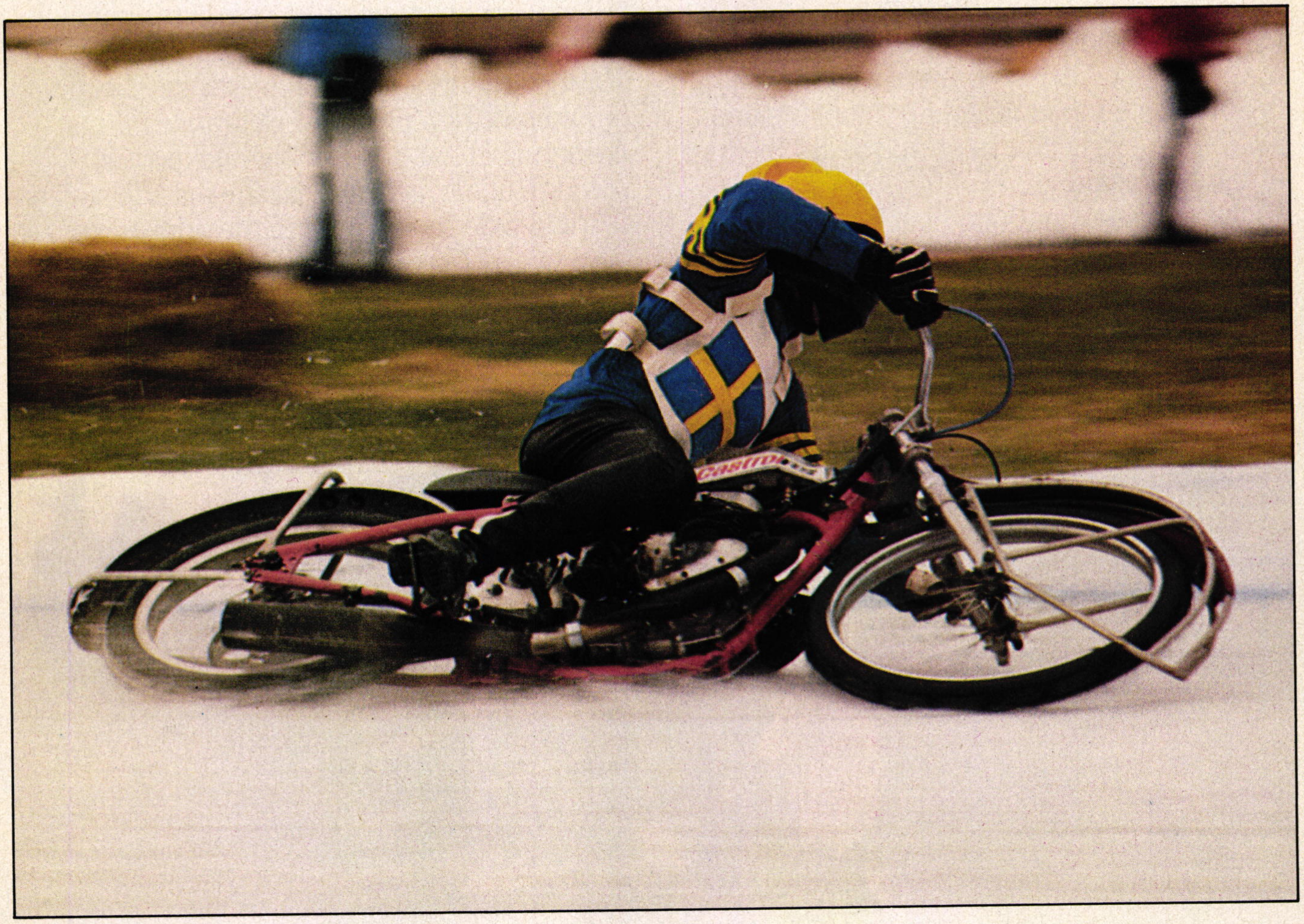
MOTO GUZZI SP
Premier Motor Corporation
Box 145
Hasbrouck Heights,
New Jersey 07604
(201) 288-9696
Fits Moto Guzzi 1000SP, can be adapted to other motorcycles.

Two-piece; integral spoiler to create aerodynamic downforce at high speeds. The head fairing is a conventional fork-mount that turns with the wheel. The lowers are frame-mounted and incorporate the spoiler. Handlaid fiberglass color-matched in silver and black. Full dashboard with speedometer, tach, eight warning lights, voltmeter and clock, ignition switch.

SPORT LINES

Cycle Guide's True Tales of Race Courses, Dark Horses and Machines at Speed

EDITED BY MICHAEL JORDAN



PHOTOGRAPHY: PAUL SALVAIRE

Tungsten Spikes And Shaved Ice

Peg-dragging may be hot, but bar-dragging is cool.

• If you think that the motorcycle with the fastest cornering speeds and greatest lean angles happens to be a roadracer, try averaging more than 60 mph on a flat quarter-mile oval with your Yahama TZ750. Or better yet, ask someone else to try. Preferably someone you don't like very much, for one of the few ways to accomplish such speeds is on an ice-skating rink. You'll need a special bike. And you'll need special tires bristling with inch-long tungsten spikes. You'll also have to learn to lean your bike over further than Kenny Roberts does, until not only your knee and foot are sliding along the ice, but your handlebars as well. For while it's possible to get roadracers, flattrackers, motocross bikes and speedway bikes leaned over, none of them do the job like an ice-racing bike.

The unbelievable grip afforded by spiked tires and the acceleration required to negotiate an Olympic-size speed-skating rink make ice-racing bikes very specialized items. The most popular bikes are manufactured by the Czechoslovakian Jawa-CZ factory and resemble the firm's successful speedway bikes very closely. The engine and frame of the two are nearly identical, but the ice-racer requires more front suspension travel and steering geometry slow enough to keep a front wheel shaken by the asymmetrical pattern of spikes tracking straight at over 80 mph on the 100-yard-long straightaways.

Like the speedway bikes, the ice-racer's Jawa engine is deceptively simple, almost an anachronism. It uses castor oil and total-loss lubrication, just like motorcycles of 60 years ago. The oil runs from a tank into the engine and then simply is dumped onto the track. You add a two-speed gearbox and the power unit is ready. You might not expect too much acceleration from this package, but the simple 500cc single produces about 60 horsepower thanks to alcohol fuel and a compression ratio in the neigh-

Continued

Why did John Paige pick the new KZ550 with long-stroke front suspension? John claims when you're a little smaller, you have to be ready to handle anything.

After all, being totally in control of a bike that's as slim and quick as the new KZ550 can make you feel just fine, and if a backpacking beauty stops for some country conversation, maybe it's John's charm or maybe it's the lure of the Kawasaki.

Of course when John bought the all new KZ550, he knew what he was getting into, so to speak. That the narrow configuration of Kawasaki's dependable four-stroke Z engine would give him plenty of clearance for fast cornering. That he'd get big-bike power through all six gears. That the air-adjustable, leading axle front fork and the adjustable

Kawasaki
KZ550
Kawasaki

rear suspension would iron out the bumps in the road. He knew that the KZ550 would have an electric starter and an anti-hot wire device.

Once he took the KZ550 out on the road, he revelled in the handling and the performance. 13-second quarter miles really get your heart started.

But there was a surprise. What he didn't expect was the price. That really blew the doors off the competition. A bike that performs this well at this price is hard to beat. All his friends agreed with that. Once they caught up with him.

When you check out the KZ550 at your Kawasaki dealer, cast your eye over the stylish KZ550 LTD. There's all the same excitement plus a few trick extras, like transistorized breakerless ignition, a dual-density foam rubber stepped seat and pullback handlebars. Choose—then get out on the road. That's where Kawasaki's new KZ550 belongs.

KZ550 LTD

Kawasaki

Don't let the good times pass you by.

Kawasaki believes in riding safely. Check local laws before you ride. Member of AMA and MSF. Specifications and parts subject to change without notice. Model availability may be limited.

Heavy traffic on the ice

The speedway formula with spikes.

borhood of 15.0:1—plenty of horsepower to propel the crude-looking 220-pound bikes at ferocious speeds.

The racing itself is structured as simply as the motorcycle. Just as in speedway, four riders compete per heat race over four laps around the quarter-mile rink. About 40 heats are run during a two-day world championship event and each rider races twice against each of his opponents.

Dressed in outlandish-looking gear, the riders look as rough and brutal as their bikes. Thick racing leathers are covered by warm woolen sweaters. Beneath the open-face helmets, leather masks are worn to protect the riders from the ice thrown up by the spiked tires. Their radical cornering technique works by virtue of a rubber pad trimmed from an automobile tire to cover the left knee and a steel clog over the top of the shoe (not the sole as in dirttrack). An emergency kill-switch is provided by means of a cord connecting the right wrist to the ignition. Once the rider leaves his seat, the engine shuts off—without this device, the bike could turn into a terrifying meatgrinder. Even with this kill-switch and the long steel fenders surrounding the tires, injured ice-racers usually require more stitches than downed riders in other motorcycle sports. Needless to say, ice-racers are regarded as crazy by other riders, even though ice-racing statistically is safer than roadracing.

It's difficult to remember that fact, however, when four bikes are revving at the starting line, the engines growling furiously and the riders pushing down on the bars with all their weight. When the starting cord swings up, the competitors release their clutches smoothly and accel-

World Champ Bondarenko fires up his engine with a portable torch

Increasing oil circulation is good for the speedway bike's heart.

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from rare talents among German and Dutch riders, only the Swedes ever have been a consistent threat to Russian and Czech domination on ice, although they never have finished better than second. If Sweden offers a better climate for practice than Czechoslovakia, its riders lack the benefit of riding dirt speedway during the summer like the Russians and Czechs. The Russians also have another advantage to add to the numerous races and many riders within their country. They are able to practice on a truly hard-bitten practice field: frozen lakes. Natural tracks with their wider turns and rougher ice seem to provide better training than the narrow ice-rinks used in international competition.

Though ice-racing is only beginning to catch on in North America through a few indoor events using modified flattrack bikes, in Europe is it a big-time sport. The world final held in late February or early March is as well-attended as the Super Bowl. It doesn't take much imagination to figure out why; all you have to do is imagine the spectacle of ice-racing within the confines of the huge Olympic-size ice stadium in Moscow this March.

—*Paul Salvaire*

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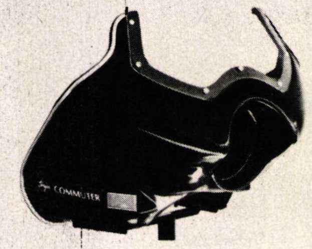
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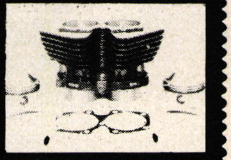

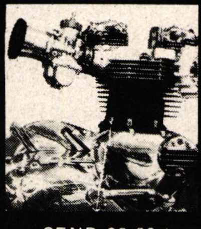
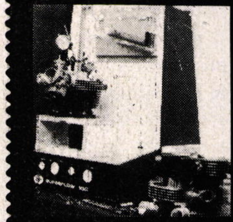
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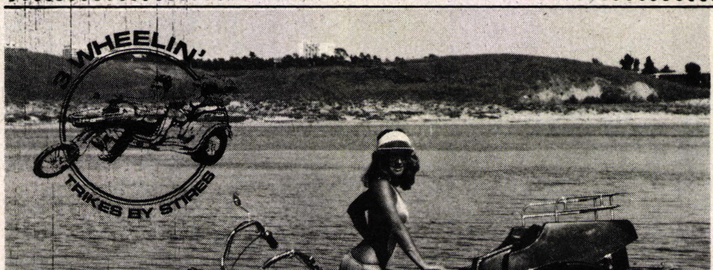

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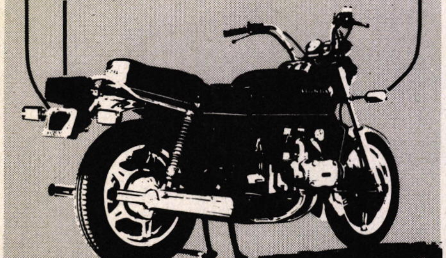
The Dualock Dualarm is a loudmouth when you're not there!
Deter thieves with this weatherproof self-contained alarm. A tough ABS housing protects the solid state adjustable sensor sounding off through dual horns–after 45 seconds of 110db noise, the alarm automatically rearms. With interlock switches behind the chrome-plated steel cover and impossible-to-remove mounting hardware, the Dualarm is tamperproof. Only $49.95.

The Dualock Multi-Brite Taillight Coupler lights up your life!
Improve visibility and safety with this simply wired taillight coupler (only 7 color-coded wires!). Turns rear signals into running and brake lights, without interfering with turn-signal functioning. The solid state Multi-Brite–a tiny sealed package–a big improvement in your safety. Only $24.95.



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Mountain View, CA
94041
(415) 969-3627

SPORT LINES *Continued*

Earthquake City

The hills are alive with sound of thumpers.

TERRY WHYTAL

• For five years, the annual AMA-sanctioned 4-Stroke National Championship Motocross held on the Carlsbad GP track in California has been growing in size and importance. The field has become larger and the spectators more enthusiastic.

Nevertheless, within those five years a few other things also have become apparent. The first is the fact that a four-stroke engine can be bolted to sophisticated motocross hardware and go very fast. The second is that experimental machines are sometimes fragile and usually a handful. The third is that the average rider probably isn't ready for the hassle. Yet Carlsbad also reveals every November that four-stroke motocross isn't just for old men. Anyone who enjoys building—not just buying—his own motorcycle can relish four-stroke motocross as much as those who simply find the sound of the big boomers hypnotic.

Big-bore thumper technology has advanced sufficiently so that the horsepower on tap is awesome, but the engines still weigh more than their two-stroke cousins and the weight sits higher in the frame. This combination of factors makes riding one of these motorized earthquakes a real problem. That was probably one of the reasons why eventual Carlsbad winner Pierre Karsmakers flew back to the U.S. from Europe several weeks before the event and was seen riding the new Pro-Tec Yamaha 600 at Saddleback Park with definite purpose.

Karsmakers let smooth riding do his winning for him, but with so much power at their disposal, other riders took a different course. Jeff Jennings got the holeshot in both motos on a Franks-built Honda. Kelvin Franks had modified an XR500 engine with a Flo-Rite head and Harmon cam and then did his best to keep all that power on the ground by adding Ohlins shocks and a trick swingarm to the Honda frame. The front end was a one-off design featuring Maico sliders, BFI fork legs and Pro-Fab triple clamps. Jennings even allowed that the bike "handles pretty well even though it weighs a lot more than a two-stroke."

Once Jennings grabbed the lead in the first moto, he rode with an authority most people wouldn't associate with four-stroke riding, holding the gas on longer down each straight with each successive lap and stuffing the bike into the turns. Pro-Tec rider Rex Staten, who won the four-stroke championship sanctioned by the CMC some four months previously, glued himself to Jennings' rear wheel.

Staten's cause was helped by many changes in the Pro-Tec bike since it was tested by *Cycle Guide* (November 1979). Skip Clark of Pro-Tec explained, "We wanted to try a different frame that might give us better all-around handling, so we're using a Bengt Aberg-replica frame. Weight has been a problem too, so we've used a lot more titanium. Then Rex got some OW Yamaha forks and wheels and that saves 3.5 pounds. So we got total weight down to 245.5 pounds."

Jennings held off Staten until his rear tire went flat under the pounding of the rough track. Then Staten moved into the lead with style. And when Staten slowed, teammate Karsmakers caught and passed him. Between motos, Staten explained that the right shock blew out and then the megaphone broke off the pipe. "The motorcycle was working so well," he said. "It's much easier to ride than the other bike and the OW front end is much nicer than a YZ. It's great to have the double-leading-shoe front brake on the OW wheel because the stocker just didn't last, especially here at Carlsbad where you need good brakes."

Marty Moates finished the first moto in third on his Knobby Shop International Honda behind Staten and then grabbed second behind Staten at the beginning of the second moto.

The KSI bike featured its attractive and intriguing frame with two Works Performance shocks working together in a monoshock configuration (*CG*, June 1979). KSI's Allen Greenwood, the prime motivator behind the Carlsbad event, reckons the continued use of a bored-out Honda XL350 engine saves about 20 pounds in the final design.

Moates used every line on the track trying to get past Staten, only to nick the Pro-Tec's rear wheel on the bottom of a downhill and take a tumble. Moates drifted back once he remounted while Jennings slipped past Karsmakers and began chasing the leader. Meanwhile, Billy Grossi, Dan Turner and Tim Lunde battled over fourth in a dice that featured some of the more prominent names in motocross from the mid-Seventies.

Lunde was aboard one of Britain's venerable CCM 500s. Aero-Pa, the distributor of Clews Competition Machines in the U.S., had trucked out a bevy of the beautiful nickle-plated thumpers from Illinois just for this event. As always, the BSA-bred engine, right-side-shift three-speed transmission, Rickman-style frame and relatively short-travel suspension distinguished it from the Japanese-based machines of modern four-stroke motocross. Nevertheless, the CCM had adequate power and on the whole went where it was pointed.

Prettiest bike honors went to Turner's capable steed built by Rod Santin. The heart of the bike was a Pro-Tec Yamaha 600 like Staten's, but with a custom four-speed transmission built by Doug Kohler. A Kayaba fork and Fox Shox held up the appropriate ends of the Aberg-replica frame, while lots of titanium kept the whole package bolted together. As with many specialty-built bikes, Rod Santin needed the help of numerous sponsors to turn out his pride and joy. Santin listed some of his sponsors and said, "There's Torco and Bosch and Hi Point and Porter Aviation and . . . We can hardly fit their names on the bike."

The motorcycle ran as well as it looked and Turner eventually finished in third ahead of Lunde when Grossi's PDQ Honda had chain problems. Meanwhile Jennings had caught Staten when the Pro-Tec bike began to spew death smoke. Staten made one more lap before retiring. "The frame was leaking oil out by the steering head and finally the rod blew," he explained with a philosophical shrug. Karsmakers finished in second and his finishes earned him the overall victory. Turner finished second with 4/3 scores. Jennings placed third.

Four-stroke motocross has come a long way since the days when it was only a picnic outing for nostalgia freaks. Real racing bikes ridden by real racers now make the starting gate, supported by a full complement of competitors in the amateur classes. Tuners frustrated by the hegemony of the factories in two-stroke motocross have attacked the problems of the thumpers with an enthusiasm that makes the bikes more ridable every year. The commercial success of Carlsbad, both in its AMA and CMC-sanctioned forms, could make Allen Greenwood's dream a reality. Maybe there is room for full-time earthquakes in motocross, just as in England.

—Terry Whytal

Continued

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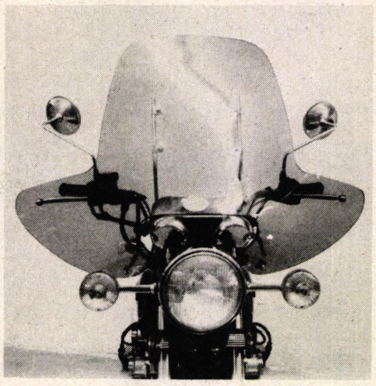

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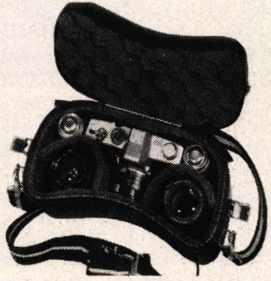

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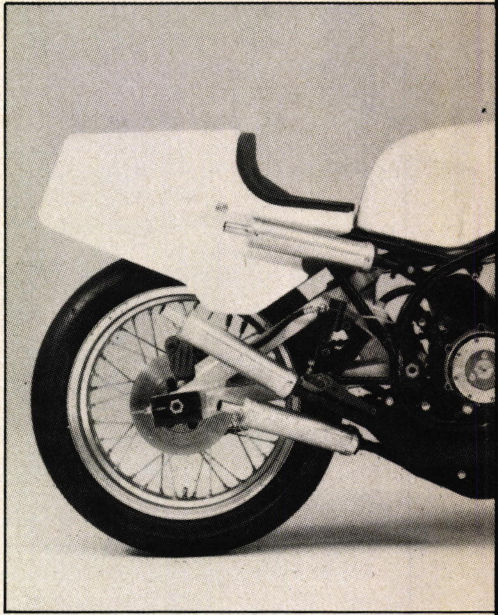


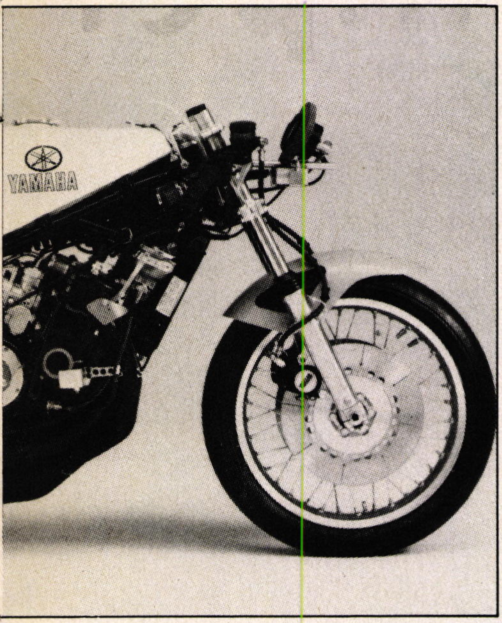
• Yamaha's Ken Clark says that only 10 TZ500s will be available to American roadracers during 1980. Each will cost $13,037, including spares. The same quick-removal transmission seen on the factory bike is featured and the transverse four-cylinder two-stroke has a mechanically operated quick-disconnect power port for more low-end grunt. In case it malfunctions, it can be disconnected. The engine's power will be reduced but a rider still will be able to make it to the finish line.

Even though the AMA will permit a Formula Libre this year, there's certain to be more than 10 riders who want one. It's rumored that Mike Baldwin wants *two*—one for American racing, the other for Euro-use. Those who get in line late might settle for a few leftover TZ750Fs for $8900. And those interested in a new TZ250 will pay $4209. The new water-cooled TZ125 will carry a price tag of $3312.

• Confirmation has arrived that the Russian GP motocross team has parted ways with KTM. KTM representatives complained that the Russians wouldn't assist with developing the bikes for the all-important American market. In addition, KTM couldn't even sell its motorcycles in the Soviet Union.

• Following Honda's announcement of a special series of CR250 engines for short-track, Kawasaki has said that a limited number of KX250 A6 engines with right-hand shifts will be made available for the same purpose.

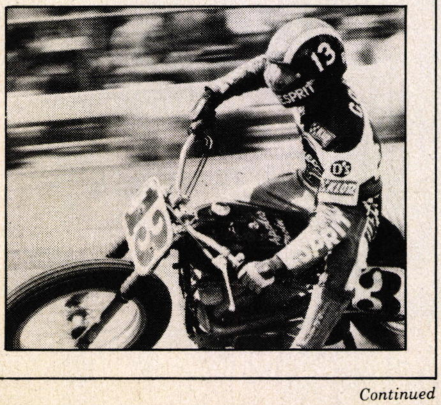
• The silly season of contract negotiations has affected the alignment of racing teams everywhere. Barry Sheene has thrown over Suzuki after seven years for a privateer sponsorship worth in the vicinity of



$400,000. Reportedly, Sheene insisted that his XR racers be prepped at his home, while Heron team manager Maurice Knight just as forthrightly maintained that the bikes should remain at Suzuki GB's headquarters. Sheene has formed his own team and stepped to the head of the line awaiting Yamaha production racers. He wants two 500s and two 750s.

Meanwhile, Suzuki reportedly is working on a rotary exhaust valve like Yamaha's power port for its racers. The valve lowers the height of the exhaust port at low engine speeds for more power. At the same time, work continues on the Yamaha rotary-valve, vee-four, two-stroke GP racer.

- Honda says that it has signed two riders for a 1980 Superbike effort. Rumors also insist that the AMA rules will place a 750cc displacement limit on Superbikes for 1981.
- Harley-Davidson announced that Jay Springsteen and Randy Goss will spearhead its flattrack effort for the new year. Rookie-of-the-Year Scott Parker will also receive help, while 1979 teamster Steve Morehead joins the semi-pro squad alongside Corky Keener. •



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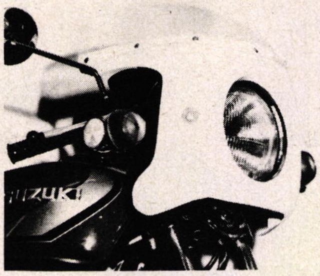

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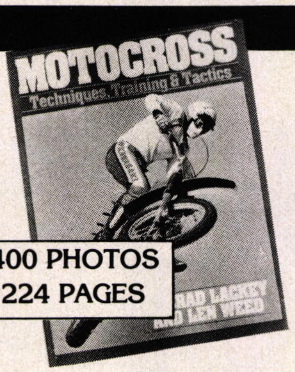

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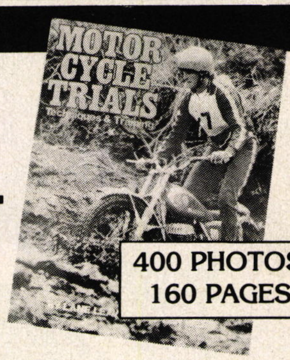

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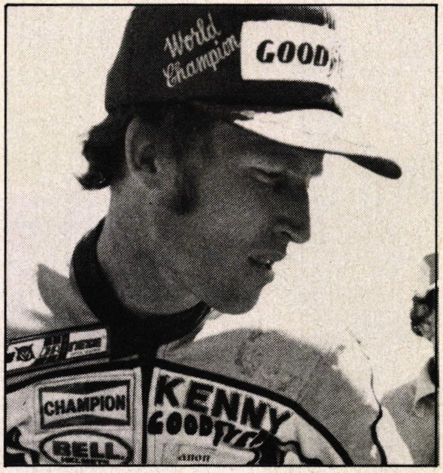
DAYTONA 200 PREVIEW:

Four-Strokes Up Front

Cooley against Roberts in the Main Event.

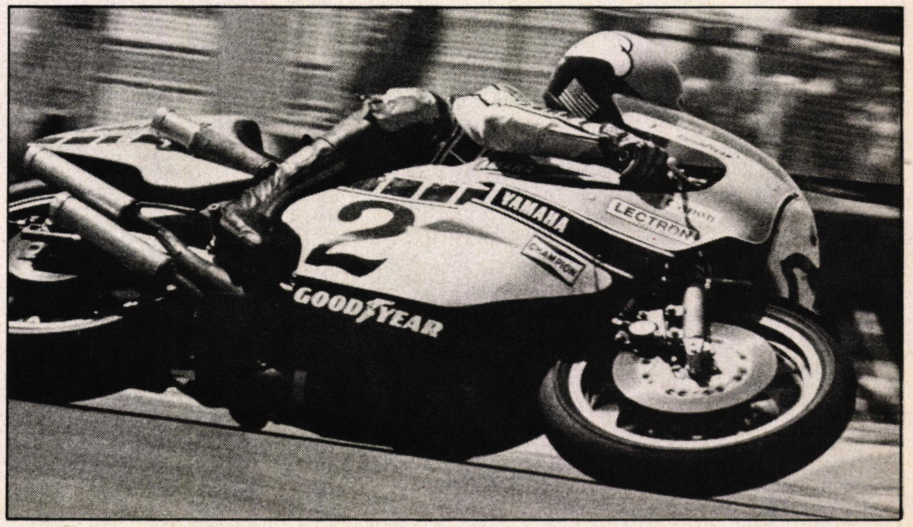


• At first it seemed like a joke. Formula 1-style four-stroke GP bikes would be allowed to compete in the Daytona 200 on March 9th. Critics snickered at the thought of obese four-strokes struggling to keep out of the way while race-bred two-strokes disappeared into the middle distance soon after the green flag.

Well, Wes Cooley—the AMA's 1979 Superbike champion—will be riding a four-stroke Yoshimura F/1 bike in Daytona's main event, and he says it's no joke. In fact, Cooley figures he just might *win.*

Such a statement might have got Cooley locked away into some State Home for the Permanently Perplexed several months ago, but Cooley has sold off the TZ750 he rode in last year's 200 to prove his confidence in the project. The Yoshimura bike sounds impressive the way he describes it. At its heart beats the "production-based" Suzuki GS1000 engine that is Pops Yoshimura's specialty, churning out 145 horsepower. Holding the engine in place is a full GP-caliber frame with Suzuki RG500 steering geometry. A new KYB fork with 40mm-diameter stanchion tubes holds up the front end and new KYB shocks with remote reservoirs are attached at the rear. New heavy-duty 310mm front brake discs have been added and anti-dive technology adapted from the RG500 GP bike insures that the F/1 bike will stop as quickly as any two-stroke.

It isn't technology alone that has buoyed Cooley's confidence, however. At Suzuki's Ryuyo test track, the Yosh-bike clocked a top speed of 179.8 mph—enough to compete with Roberts YZR, Cooley believes. "My Yamaha wouldn't go 180—maybe Kenny's will, but that's it," he says. "And my stock TZ750 weighed 351 pounds last year. The F/1 bike weighs 365 pounds and I *know* Pop's bike puts



Rapid Roberts and his familiar yellow-and-black YZR750

Facing his familiar Daytona nemesis—second place—with determination.

out more horsepower." Despite test sessions plagued by engines soured because of bad gasoline, Cooley was able to match the quickest time of Suzuki's top RG500 test rider within only ten intermittent, troubled laps.

While in Japan for the F/1 bike's shakedown, Cooley also was able to ride a few laps with an RG500 on the track at the same time. And while he admits that the Yosh-bike has teething problems, he also says the four-stroke gave up nothing to the two-stroke on braking or acceleration—only the better weight distribution of the RG helped it get through corners more quickly. And with that experience as well as his riding time on Superbikes and GP bikes at Daytona in mind, Cooley is prepared to do a little preliminary handicapping of the Suzuki's and Yamaha's advantages and disadvantages around Daytona—just for fun.

In the long bend that leads off the banking and into Turn One, Cooley believes the F/1 bike will have the advantage because engine braking will help it go deeper into the corner than the Yamaha. The tight radius of Turn Two gives the Yamaha the advantage because it's easier to flick from side to side. In Turn Three, the Yamaha should have the advantage going in, but Cooley reports there's a slick spot in the pavement coming out where he can put the tractable power of the four-stroke to good use, giving him the advantage. Turn Four is even, but Turn Five where the bikes climb onto the banking should be all Suzuki. Cooley doesn't think he'll have to give ground under braking into the chicane and elsewhere on the high banking he should have the edge over the Yamaha.

Of course, the combination of Kenny Roberts and the factory Yamaha YZR750 could make hash of this handicapping. Roberts has already gone 2:03 during testing and believes his new bike will squeak under the 2:00 mark. Even so, Cooley has his hole cards. First, he says, "Pops really likes that track; he knows what to do and he's got lots of tricks." Then there's the fact the Suzuki should be superior in passing situations, "The four-stroke is more tractable, so if I get bogged down by another rider or while racing, I can get off line and use torque and horsepower to get back in front. If you make a mistake with the Yamaha, it just dies." But the largest advantage the Yoshimura camp has will be its one fuel stop—the two-strokes will require two. "That means Kenny will have to go for the lead from the beginning to make up the 30 seconds he'll lose when he pits for the second time," Cooley grins. And anything can happen when you have to race hard the full distance.

"Anything can happen," is a phrase Cooley uses a lot as he looks forward to Daytona. All he asks for is an even chance to win, and the Yosh-bike has given him that. And after all, Kenny Roberts has been racing at Daytona for a lot of years and yet he's taken home the winner's trophy only once. It could be that a lot of skeptics will be laughing out of the other side of their mouths when Cooley rides his four-stroke F/1 bike across the finish line of the Daytona 200.

—Michael Jordan

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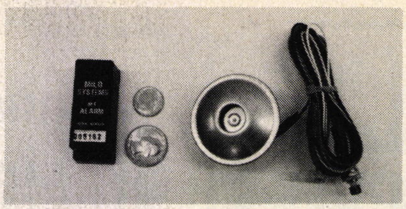

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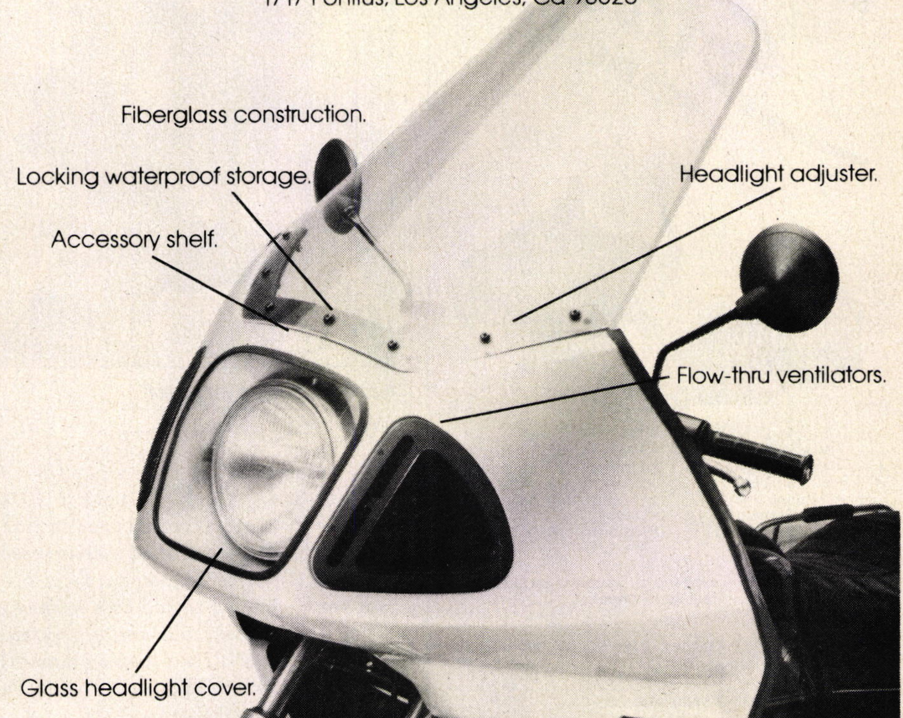

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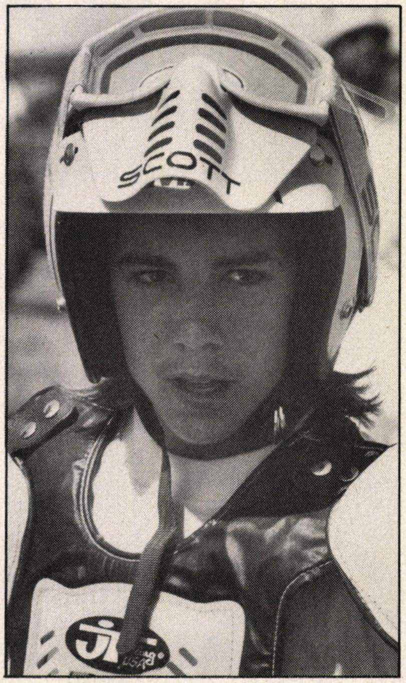
At age 15, Kehoe already has more than four years of racing behind him, most of it in first place. Yamaha has been quick to recognize his potential, and supplies him with a factory-wrenched YZ80 for his races. Yamaha prepares the bikes as a YZ80 development project and then Kehoe's father Joe takes over at the track. For the Ponca City event, however, Yamaha shipped a mechanic to the race just to watch over the YZ.

Yamaha also is anxious to move Kehoe



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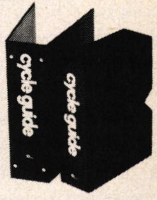

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into the 125 class. For 1979 it supplied Kehoe with the world's trickest YZ100—a YZ125 with a scaled-down engine and YZ250 suspension. For 1980, Yamaha has delivered its new YZ125G to him. Kehoe already has begun to win the Intermediate class at local Southern California events and soon will be in the Expert class.

Although Kehoe is currently the fastest mini rider in the country, he has no guarantee of success when he eventually joins the elite world of AMA motocross. It's a big step from minibike racing to the big bikes, from a few fast rivals on a lazy summer day under the trees of Indian Dunes to a 40-man field under the lights at a Stadiumcross. And Kehoe knows it. "It's a big jump and you have to stay cool and not get too nervous," he says.

The change to big bikes clearly is a difficult one. Marty Smith and Broc Glover handled the transition successfully, but many other former mini riders are still struggling to regain the clear advantage they once had over their competitors. Team Suzuki's Brian Myerscough, for example, was nearly unbeatable as a miniracer and rode so quickly he was protested almost

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weekly. Myerscough made his mark on 125 National racing in 1979, but he's no longer unbeatable. Looking back on his minibike racing, Myerscough comments that "the minis help you ride better, but not that much." He figures he's a better rider today because of the minis, but the competition now is simply more intense. He looks wistfully into the distance and adds, "It's a lot tougher; more pressure and you have to practice a lot . . . It's really a lot more work."

But Kehoe says he's ready and willing to go to work on motocross. "I don't mind working hard," he says, "and I like to practice." He already competes twice a week, practices for hours and regularly runs five to six miles for conditioning. In addition, Kehoe likes to work on his bikes—unlike many of his contemporaries. His understanding of the way his motorcycle works could be invaluable in making adjustments to changing track conditions on the professional circuit.

51
YAMAHA
BELL

Even so, Kawasaki's top 125 racer and former minibike winner Jeff Ward finds other problems with beginning a racing career on the little bikes. Ward once rode the downsized racers with such speed and style that he was dubbed "the Flying Freckle," and he made the shift to bigger bikes fairly easily. But he points out that if experience were the only ingredient necessary in a top caliber racer, minibike riders would have an automatic advantage—but on the track they do not. Ward thinks that the skills required to pilot a little bike and a big one are

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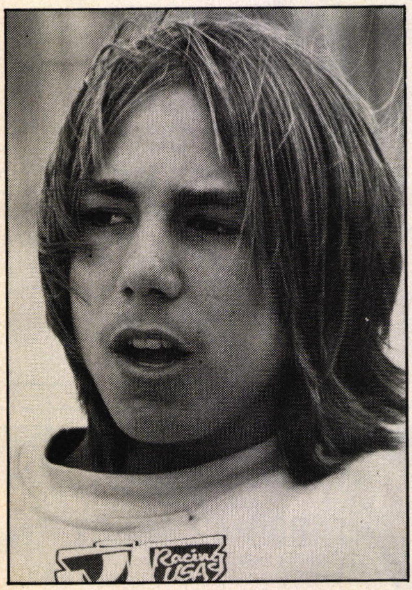
not necessarily the same. "When you leave the minis it's just like starting over," he says. "The minis teach you skills and balance, but in the big races it's totally different. You need talent more than experience." In fact, Ward continues, "What helped me most about the minis was having to ride an XR75 against all the faster bikes. It taught me to use strategy."

Kehoe understands the problems of continuing his career in the professional ranks, but he isn't daunted. "The thing about motocross is that I love it," he emphasizes. "People say you can get burned out, but if you like the bikes as much as I do, you won't ever get tired of them." And as for the question of talent versus experience, Kehoe is convinced that "riding the minis is a big advantage." And after all, he's already demonstrated his ability to win.

When Kehoe talks about racing, he bubbles with confidence and exuberance. You have to believe he has the right attitude. The transition to the bigger bikes won't be easy, but many who have seen his riding style are already calling him the next Bob Hannah. And why not? Kehoe already has one thing in common with riders like "Hurricane" Hannah, "Typhoon" Tripes and Kent Howerton, "The Rhinestone Cowboy." "Earthquake Eric" already has a nickname. —*Terry Whytal*



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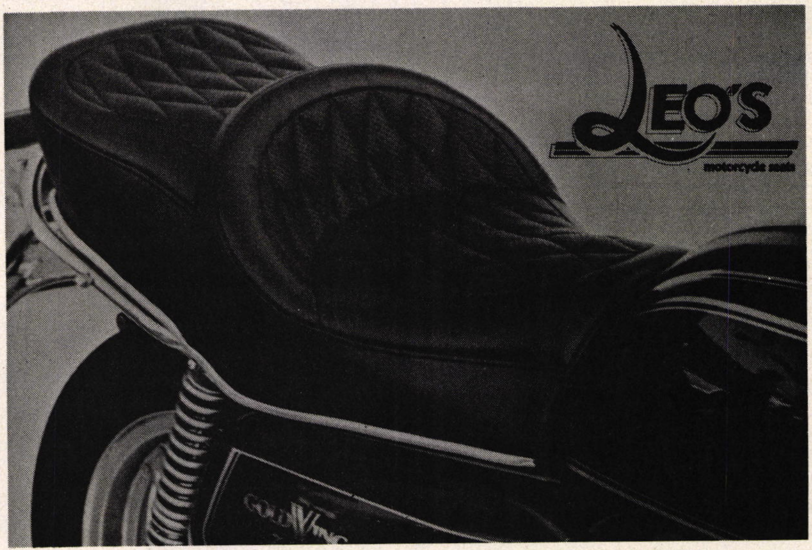

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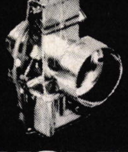

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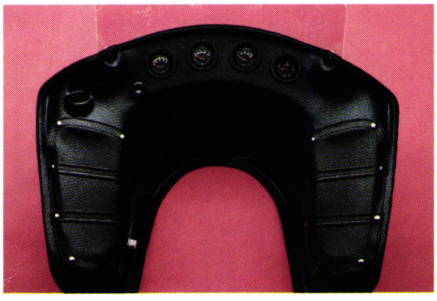

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